

# MANUFACTURERS' RECORD

A Southern Industrial, Railroad and Financial Newspaper.

VOL. XVI. No. 18.  
WEEKLY.

BALTIMORE, DECEMBER 7, 1889.

\$4.00 A YEAR.  
SINGLE COPIES, 10 CENTS.

**JAMES SMITH & CO.** MANUFACTURERS OF **IRON AND ENGINEERS' SUPPLIES**.  
**EUREKA** SOLE MAKERS OF **PACKING** **WOOLLEN & COTTON MACHINERY**.  
**RED DIAMOND** **PHILADELPHIA** **SHAFTING** **HANGERS** **PULLEYS OF EVERY VARIETY**.  
**MANUFACTURERS OF EVERY DESCRIPTION OF CLOTHING**. **JAMES SMITH & CO.**

**Milling Outfits for Flour and Meal.**  
 WE MAKE ROLLS AND PORTABLE MILLS COMPLETE.  
 Manufactory Established in 1851. Pamphlets with Prices Mailed Free.  
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**FLOUR and CORN MILLS**

ALL SIZES  
COMPLETE.

Write for plans and estimates.

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Established 1825.

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**MORSE ELEVATOR WORKS.**  
**MORSE, WILLIAMS & CO.** Successors to CLEM & MORSE.  
 Manufacturers and Builders of HYDRAULIC STEAM, BELT and HAND-POWER PASSENGER and FREIGHT ELEVATORS.  
 Office, 1105 FRANKFORD AVE.; Works, FRANKFORD AVE., WILDEY AND SHACKANAXON STREET, PHILADELPHIA, PA.  
 Send for Illustrated Circulars. Branch Office, 108 Liberty St., New York. MORTON, REED & CO., 3 & 5 German St., Agents for Baltimore. Boston Office, 14 High St.

## SPECIAL NOTICE.

We have just issued a Catalogue and Price List of Mining, Tunneling and Quarrying Machinery. This Catalogue will be MAILED FREE TO CONTRACTORS, ENGINEERS, AND TO ANY ONE ENGAGED OR INTERESTED IN ROCK EXCAVATION OR AIR COMPRESSION. To all other persons it will be sent on receipt of 50 cents in postage stamps.

INGERSOLL-SERGEANT ROCK DRILL COMPANY,  
10 Park Place, New York.

**THOS. K. CAREY & BROS.** Agents for the Dodge **INDUSTRY** Patent Wood Split Pulleys.  
**Machinery, Mill and Railroad Supplies.**  
 26 Light Street, Baltimore, Md.  
 Carrying Car-Load Lots of Assorted Sizes in their Warehouse in Baltimore.  
 WRITE FOR PRICE-LISTS AND DISCOUNT.

The **Milburn Patent Wood Split Pulleys** are the Best in the World.  
 Cotton Gins, Engines and "Self Packing" Hydraulic Presses, Boilers, Gins, Feeders and Condensers.  
 Write for Illustrated Catalogue and Price List.  
**MILBURN GIN & MACHINE CO., MEMPHIS, TENN.**  
 Largest works of the kind in the world. E. VAN WINKLE GIN & MACHINERY CO., Atlanta, Ga.

**ROBINSON & ORR, PITTSBURGH, PA.** Steel Rails and Fastenings.  
**FRANK W. SWETT, MANUFACTURER OF BAND SAWS,** 68 & 70 S. CANAL ST. CHICAGO, ILL. Every Blade Warranted.  
 WE BUY OLD IRON AND STEEL RAILS (for reworking or melting) WRITE US.

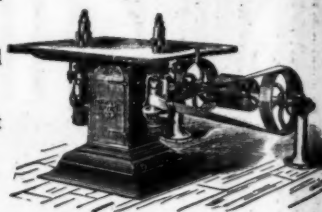
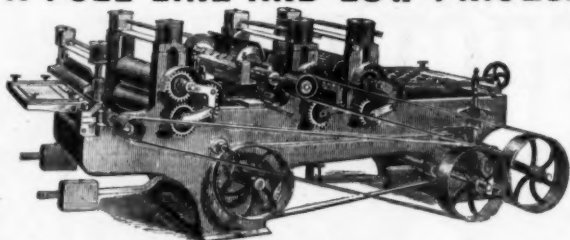


## A detailed black and white illustration of a mechanical device, possibly a pump or engine component. It features a large flywheel on the right side, connected to a complex system of gears and levers. The device is mounted on a sturdy base and has a label on top that reads "PUMP &amp; ENGINE". The illustration is highly detailed, showing various mechanical parts and their interactions.

Planing,  
Matching,  
Moulding,  
Tenoning,  
Mortising,  
Boring,  
Shaping,  
Carving,  
Etc.

**A FULL LINE AND LOW PRICES.**

Write for  
new illustrated  
catalogue  
(just out) and  
our  
latest price-list  
Mention  
this paper.



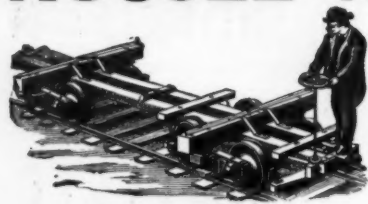
## MACHINERY AND COMPLETE OUTFITS.

**FRANK & CO.** 176 TERRACE STREET, **BUFFALO, N. Y.**

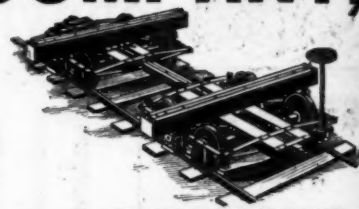


# RUSSEL WHEEL & FOUNDRY COMPANY,

## Detroit, Mich.



NO. 2 LOGGING CAR



NO. 5 EXTENSION REACH LOGGING CAR

# Logging Cars,

**And Cars for Lumber, Mill, Wood and Mining Purposes.**

**Established 1840.**

## HENRY DISSTON & SONS.

**Established 1840.**

**Incorporated.**

# Keystone Saw, Tool, Steel *and* File Works,

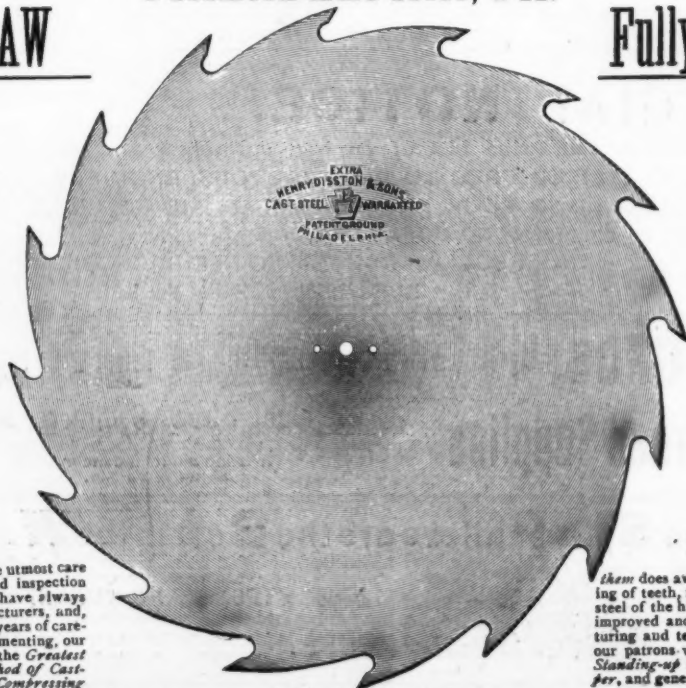
PHILADELPHIA, PA.

# Every SAW

# Fully Warranted.

**BRANCH HOUSE:**  
**Cor. Randolph and Market Streets,**  
**CHICAGO, ILL.**

Send for Price List and Discount Sheet and  
New Illustrated Edition of Files.



**BRANCH HOUSE:**  
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Send for New edition of Lumberman's Handy  
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**W**E have always taken the utmost care in the manufacture and inspection of our steel and saws, have always headed the list of saw manufacturers, and, we are happy to say, that after years of careful study and expensive experimenting, our efforts have been crowned with the *Greatest Success of the Age, as our Method of Casting Steel Ingots and Process of Compressing*

them does away with the splitting and spalling of teeth, makes a hard, tough and elastic steel of the highest quality, which, with our improved and patented process of manufacturing and tempering enables us to furnish our patrons with saws that for *Toughness, Standing-up Quality, Uniformity of Temper*, and general superiority,

HAVE NEVER BEEN EQUALLED.

**INDIANA MACHINE WORKS**  
  
**FORT WAYNE**  
**INDIANA**  
**BUILDERS OF**  
**WOOD WORKING**  
**MACHINERY.**  
 \* WRITE FOR DESCRIPTIVE CIRCULARS \*

**\$250 WILL BUY THE BEST**



# SAW MILL

**FOR THE MONEY.** Send for Descriptive Circular  
**RICHMOND MACHINE WORKS**  
**RICHMOND, - - INDIANA.**

**SAWYERS SAY OF SAWS FILED ON ROGERS' SAW FILER AND GUMMER, THAT OF ALL THE S THEY EVER USED, THEY NEVER USED AS THESE S**

**SEMI-AUTOMATIC;** the operator moves the lever back and forth, which causes the saw and emery wheel to move in unison, jointing, gumming and planing the saws. The operator can stop at any time and backwash. Compact and easily stored. We send them to responsible parties for inspection and trials. **TRY ONE!** Send for Catalogue, No. 10, to **W. H. Hart Emery Wheel Co., Ltd., Hamilton, Ont.; William Pool, Halifax, Eng.; J. S. Gresham & Co., Boston and New York; J. S. Gresham & Co., Montreal, Can.; A. R. Williams, Toronto, Can.; Macmillan Engine Co., N. Branchford, Conn.; Bagshaw & Co., London, Eng.; Bagshaw Freres, Paris, France; Bagshaw & Co., Sydney, N. S. Wales.**

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**BUY AND SELL** Second-hand Saw, Stave  
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Churn and Ice Machinery, for CASH  
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BY ACCIDENTS TO  
**WORKMEN BY INSURING WITH**

## Employers' Liability Assurance Corporation.

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Firms with pay rolls of  
over Sixty Million Dollars now protected



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THE OLDEST AND LARGEST  
**Rubber Belting** with smooth metallic bearing surface.

This company has manufactured the largest Belts made in the world for the principal elevators at Chicago, Buffalo and New York.

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MINNEAPOLIS, 28 S. 2d Street.  
CINCINNATI, 161-165 W. Pearl St.  
CLEVELAND, 128 Superior St.  
SAN FRANCISCO, 17-19 Main St.  
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DETROIT, 16-24 Woodward Ave.  
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BUFFALO, 124-128 Washington St.  
NEW ORLEANS, 8-12 N. Peters St.  
KANSAS CITY, 1311 West 12th St.  
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(Freihafengebäude).



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**Steam and Water Hose.**

RUBBER "TEST" HOSE, made of Vulcanized Para Rubber and Carbonized Duck.  
Cotton "CABLE" HOSE, Circular, Woven, Seamless, Antiseptic, for the use of Steam and Hand Fire Engines, Force Pumps, Mills, Factories, Steamers and Brewers' use.

Patent Elastic Rubber Back Square Packing

Rubber Mattings, Mats, Stair Treads, etc., for Halls, Flooring, Stairs and Iron Stairways, etc.



**Vulcanite Emery Wheels**

DO NOT CASE HARDEN. DURABLE, SAFE AND STRONG.

**BOILER and PIPE COVERINGS.**



ABSOLUTELY  
**FIRE PROOF,**  
Light and Cheap.  
EASY TO APPLY.

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HYDROSTATIC PRESSES for LINSEED, MUSTARD SEED and CASTOR OILS,  
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WILLARD L. CANDLER, TREASURER.

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**Insulated Wires and Cables.**

Those who have used OKONITE Wires and Cables are unanimous in their declarations that it is the best insulated medium in the market.

Sole manufacturers of the CANDEE AERIAL WIRES, OKONITE TAPE, for making waterproof joints, and MANSON PROTECTING TAPE, to prevent abrasion.

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**Electrical Goods of all Kinds, from a Wire Staple to a Dynamo.**

Okonite Wire Cables and Tubing. Candee Weather-Proof Line Wire. Okonite and Manson Tapes.

Write for Catalogues.

310 N. Third Street, St. Louis, Mo.

**The Wenstrom Dynamo.**

INCANDESCENT AND ARC LIGHTING.

For Residences, Factories and Central Stations. Absolutely Safe. No Danger to Life or Property. Simple, Compact and Durable.

We guarantee that it will give 25 per cent. more light per horse-power, whilst the speed required is only about one-half of that of any other system. It is economical in price and is the only Dynamo manufactured in the South. We also manufacture

**MOTORS from 5 to 50 Horse-Power,**

and our Dynamos and Motors require no experienced labor to operate. All parties contemplating putting in Electric Plants would do well to correspond with us.

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**R. SWORMSTEDT & CO.**  
**MILL FURNISHERS**

— MANUFACTURERS' AGENT FOR THE —

**Steel Key Detachable Link Belting,**  
For ELEVATORS, CONVEYORS and TRANSMISSION of POWER

Shafting, Pulleys and Hangers a Specialty.

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MILL  
STONES  
—AND—  
BOLTING  
CLOTHS

**The Caldwell Patent Spiral Steel Conveyor**

MADE OF STEEL, DOUBLE BOLTED, DOUBLE COLLARED AND EXTRA STRONG COUPLINGS.

Specially Adapted to use in Handling Cotton Seed and all its Products, Fertilizers and Phosphates.



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**Mill and Grain Elevator Supplies.**

**H. W. CALDWELL,**

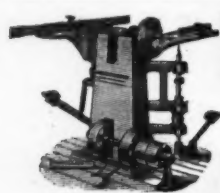
181 and 183 West Washington Street,  
CHICAGO, ILLINOIS.

AVE R Y

CORRUGATED  
BUCKET  
PATENTED

THE CALDWELL PATENT.





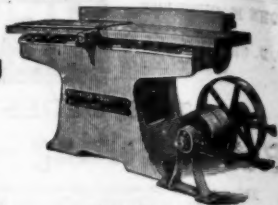
Sash Mortiser and Rellisher.

# WILLIAMSPORT MACHINE CO., Limited,

COR. WEST 3D AND WEST STREETS, WILLIAMSPORT, PA.

MANUFACTURERS OF

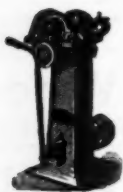
## Improved Wood-Working Machinery.



Hand Planers.



Blind Slat Re-Saw.



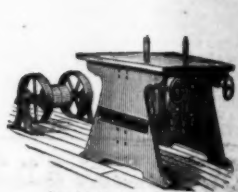
Blind Slat Tenoner.



Pin Making Machine.



Band Saws.



Double Spindle Shapers.

# LEVI HOUSTON, Wood-Working Machinery.

Planers, Matchers, Panel Planers, Moulders,  
Slat Saws, Stickers, Boring Machines, Tenoners, Swing Saws, Mortisers,

Panel Raisers, Sash Dovetailing Machines,

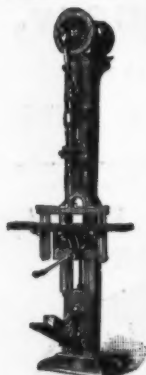
SAND PAPERING MACHINES,

Blind Rabbeting Machines, Etc.

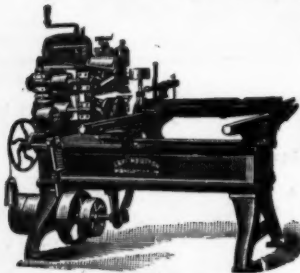
On the Philadelphia & Erie and Philadelphia & Reading Railroads.

MONTGOMERY,

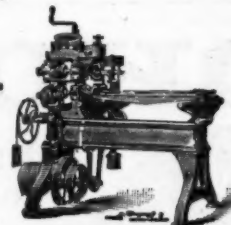
Lycoming Co., Pa



SASH MORTISER.



DOOR TENONER.



SASH TENONER.



DOOR MORTISER.

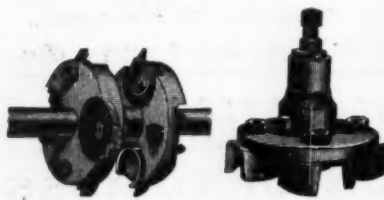
## THE SHIMER MATCHER HEADS

The Cheapest! The Strongest! The Most Durable!

AND YET THE LIGHTEST AND EASIEST RUNNING MATCHER HEADS  
IN THE WORLD. UPWARD OF 25,000 SOLD.

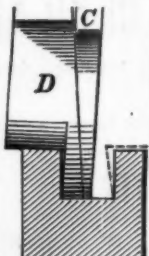


FLOORING MATCHER HEADS.



BOX BOARD MATCHER HEADS. JOINTER HEAD.

The Bits are arranged in upper and lower series, and secured to a Head having seats alternately inclined for the purpose of giving the side clearance to their cutting points. This explains why these Bits hold their shape and turn out standard work until used up; the entire circle of Bit being tool cutting edge. This diagram represents a Bit (D) in the position it occupies when making a cut; the Bit (C) which follows to complete the work, is given in outline.

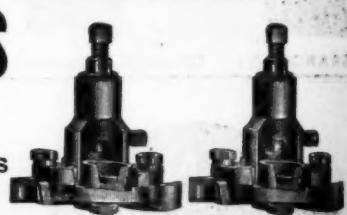


This explains the division of cut and the easy working of the tool. They finish hard, cross-grained and knotty lumber neatly, showing clean cut edges, and often save their cost in one day's run.

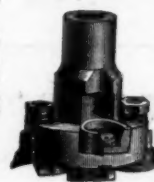
We also make SHIP-LAP HEADS, JOINTER HEADS, DADO HEADS, SASH HEADS, DOOR HEADS, COPE HEADS, and Heads for any special work where a perfectly uniform pattern is required. Send for Descriptive Circular.

Samuel J. Shimer,

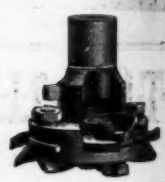
Milton, Penn.



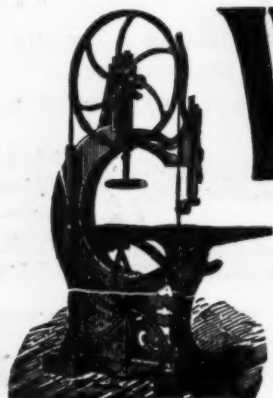
SHIP LAP HEADS.



DOOR HEAD.



SASH HEAD.



# Wood Working Machinery



COMPLETE OUTFITS FOR PLANING MILLS

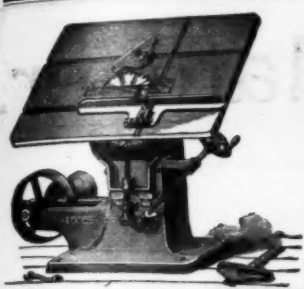
H. B. SMITH MACHINE CO.

Send for catalogue and visit our extensive  
warerooms if possible.

925 MARKET STREET.

PHILADA, PA., U. S. A.





Variety Saw.



No. 8 Hand Saw.

## THE EGAN COMPANY

228 to 248 W. Front Street,  
CINCINNATI, O.

MANUFACTURERS OF

## Wood-Working Machinery.

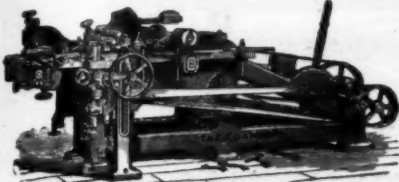
The Largest Line in the United States. Complete  
Outfits Furnished. Write for catalogue and prices.



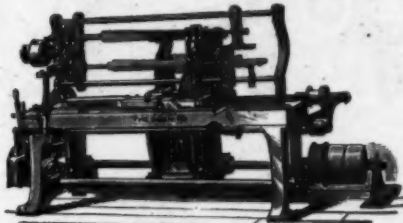
No. 3 Scroll Saw.



Horizontal Boring Machine.



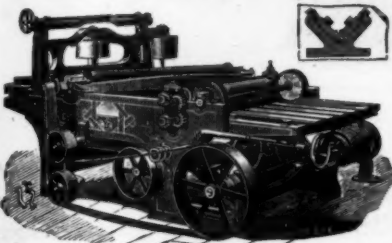
Standard Molders, 7, 8, 9 and 10 inch.



Automatic Spoke Lathes.



No. 7 Planer and Matcher.



Diagonal Planer and Polisher.



## ROWLEY & HERMANC

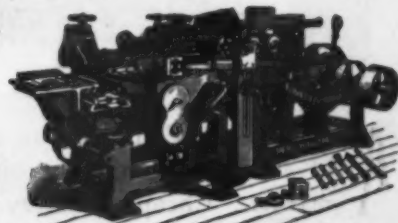
WILLIAMSPORT, PA., U. S. A.

Manufacturers of the Finest and Most Complete Line of

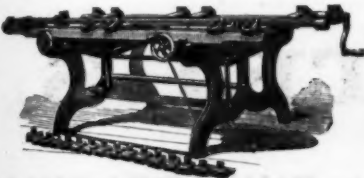
## Wood-Cutting Machinery

IN AMERICA.

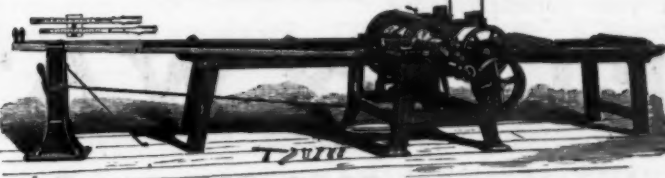
Write for Illustrated Catalogue and Special Prices.



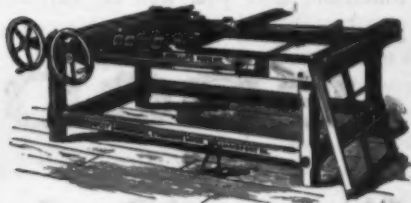
Improved 9-inch and 10-inch Moulder.



Patent Door and Blind Clamp, with or without Sash Attachment.



No. 1 New King Power Feed Gang Rip Saw.



Phillips Patent Sash Clamp.



Special Machines for Furniture, Basket and Toothpick  
FACTORIES.

## IMPROVED

ROTARY-CUTTING

## Veneer Machines

STRONG, SOLID,

Durable, Accurately Made, Double Drivers, Positive Feed, Completely Adjustable. AUTOMATIC CHANGE OF PITCH varies the pitch of knife to the varying size of log, always holding it in position to do the smoothest, soundest cutting on all sizes of log and thickness of cut - the perfection of cutting. Built in all sizes within practicable limit. Adapted to the production of all kinds of thin-cut lumber. Also builders of Clippers and Rolling Cutters for Dimension Veneer Stock and Special Machinery. Send for circulars.

COE & WILKES,

PAINESVILLE, OHIO.

## SPECIALTIES.

Match, Toothpick, Basket & Barrel

## MACHINERY.

## THE BLAKESLEE VENEER MACHINE.

The Most Practical  
in the market.

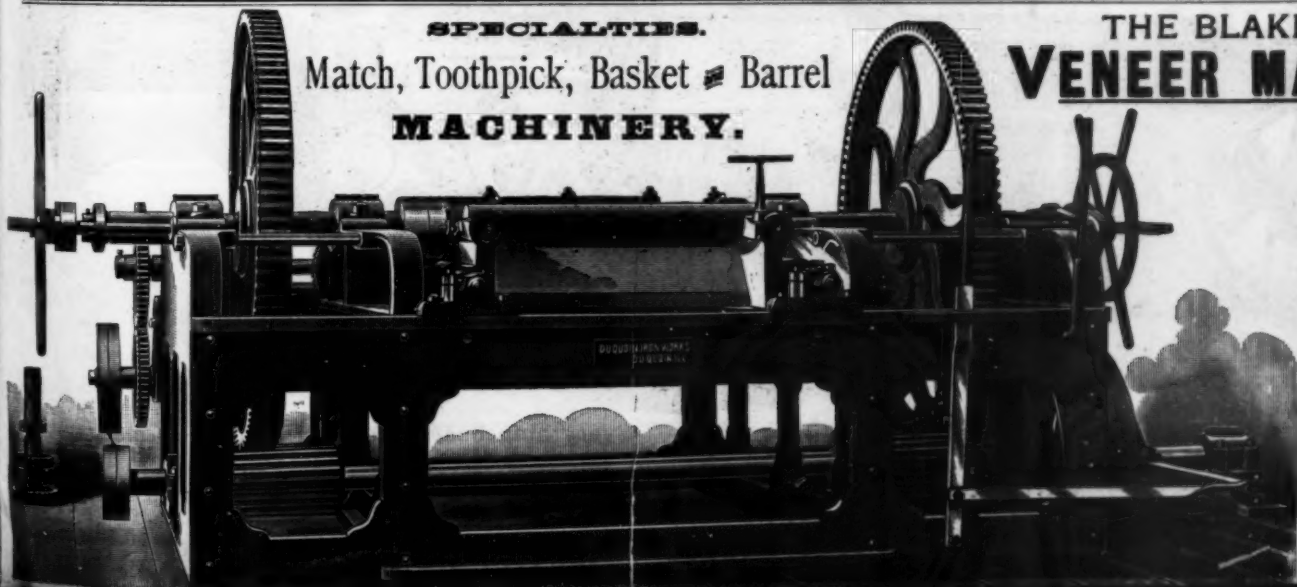
MANUFACTURED IN SIZES  
TO MEET ALL RE-  
QUIREMENTS.

We also make Veneer  
Slicers and other  
Specialties.

Correspondence Solicited.  
Write for Catalogue.

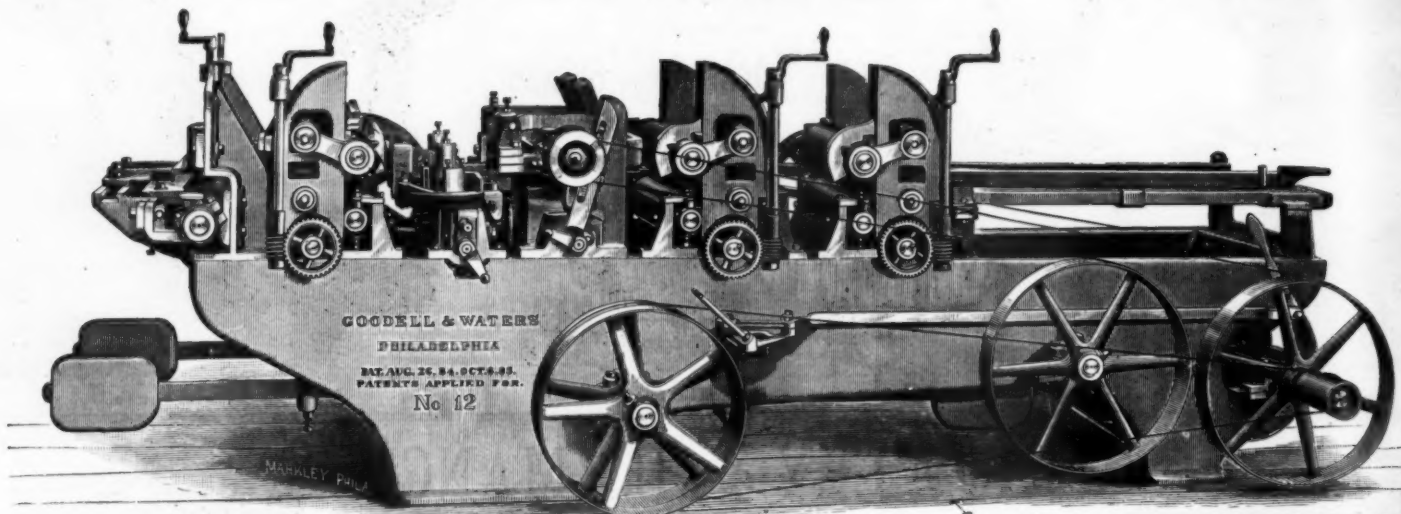
Du Quoin Iron Works,  
DU QUOIN ILL.

G. F. BLAKESLEE, Prop'r.





# No. 12 Six-Roll Planer *and* Matcher.



ANOTHER SPECIALTY of a series of new machines that are eminently successful. The No. 12 is pronounced by one of the leading mill men of Philadelphia to be the easiest running and most conveniently adjusted machine on the market. Cheap machinery is costly in the long run. We pride ourselves on excellent workmanship, perfect designs and the best materials obtainable; all that goes to make the quality of our product. We are having a lively run on this machine, and you will be satisfied that our claims to superiority are well-founded, when you examine the merits and good points about it. We solicit your correspondence.

## GOODELL & WATERS,

IN THE WEST

MAKERS,

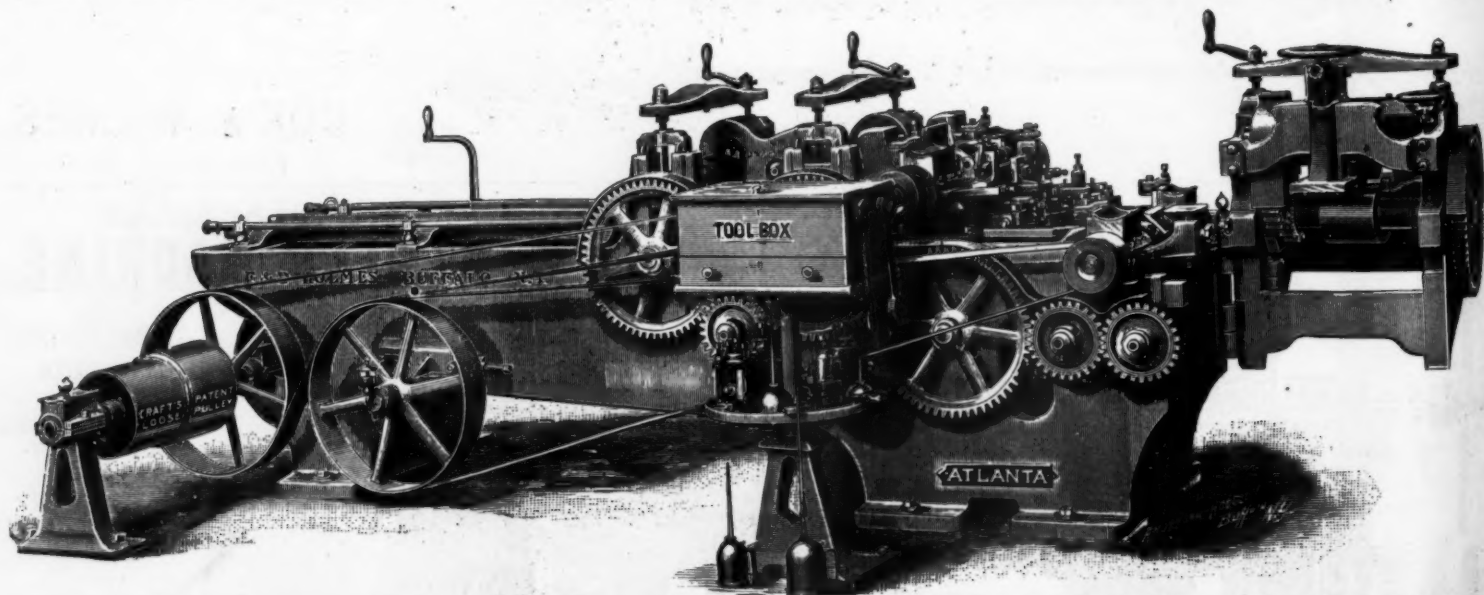
Chicago and San Francisco.

3002 Chestnut Street, PHILADELPHIA.

# High-Grade Machinery

==\* FOR WORKING WOOD. \*

Made from New Patterns with all the Latest Improvements.

**FULL LINE.**

Compare our Machinery with other makes.

Everything Guaranteed and sold on its merits.

WRITE FOR DESCRIPTIVE CIRCULARS OR BLUE PRINTS.

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BUFFALO, N. Y., U. S. A.





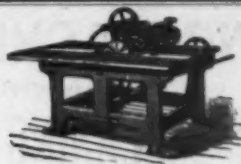
No. 2½—Pacific Planer and Matcher.



No. 4½—Smoothing Planer.



Horizontal Borer.



No. 2—Self-Feed Rip Saw.



No. 3—Molding Machine.



No. 2 Fret Scroll Saw.

W. H. DOANE, Pres't.

**J. A. FAY & CO.**

D. L. LYON, Sec'y.

CINCINNATI, OHIO.

Manufacturers of  
—PATENT—

**Improved Wood-Working Machinery**

OF EVERY DESCRIPTION,

For Planing Mills, Sash, Door and Blind Shops, Furniture, Carriage and Wagon Factories,  
Spoke, Wheel and Agricultural Works, Car Shops, etc.



No. 3 Band Saw.

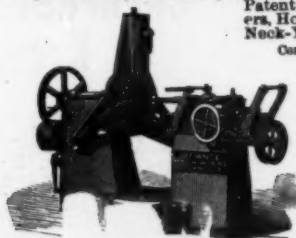
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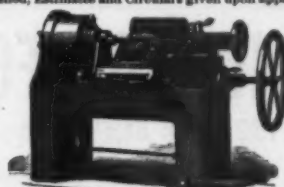
Manufacturers of HUB, SPOKE, WHEEL, BENDING, WAGON AND CARRIAGE MACHINERY,

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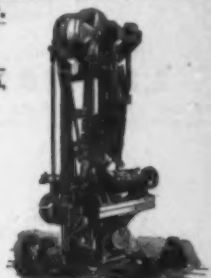
Patent Automatic Combined Spoke Turning and Squaring Machine for common, seven patent, or sharp-edged spoke turning. Capacity 2500 per day.



Wheel Boxing Machine.



Patent Hub Turning Machine.



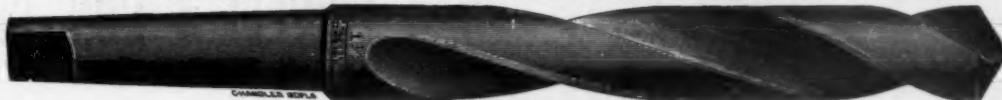
Patent Automatic Double-Chisel Hub Mortising Machine. Built in three sizes.

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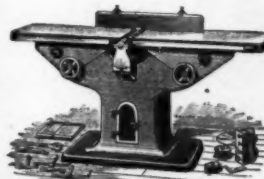
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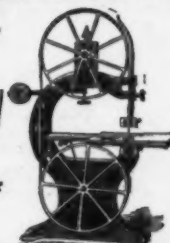
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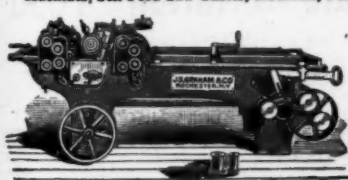


NO. 2 BAND SAW.

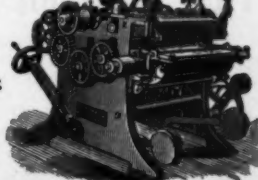
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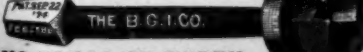
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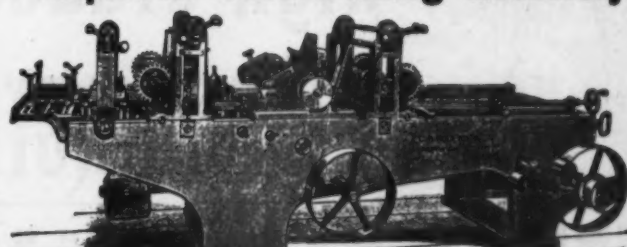
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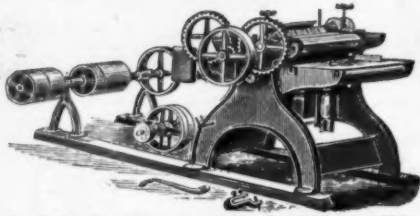
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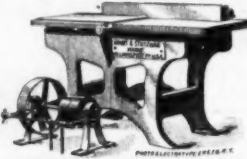
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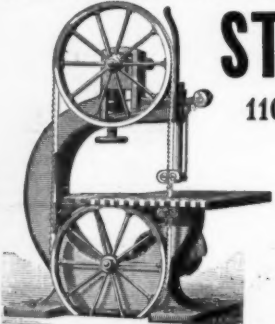
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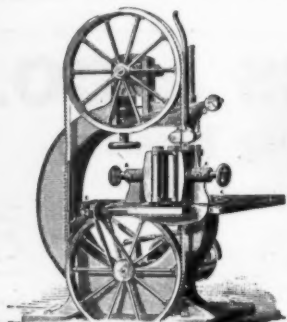
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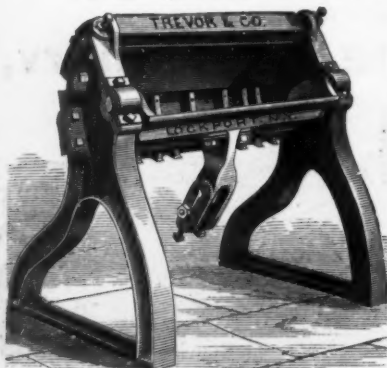
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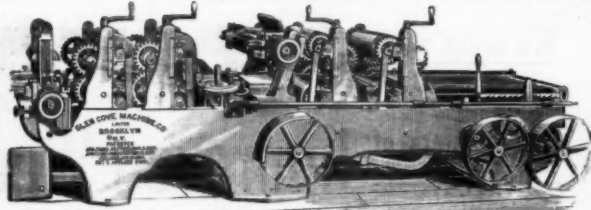
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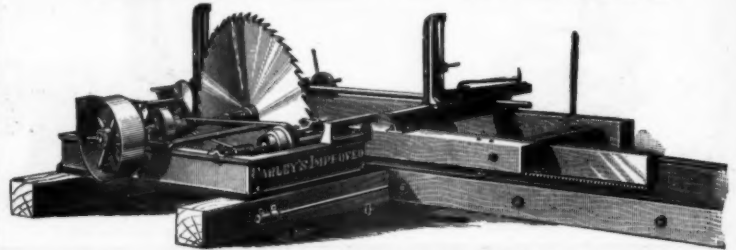
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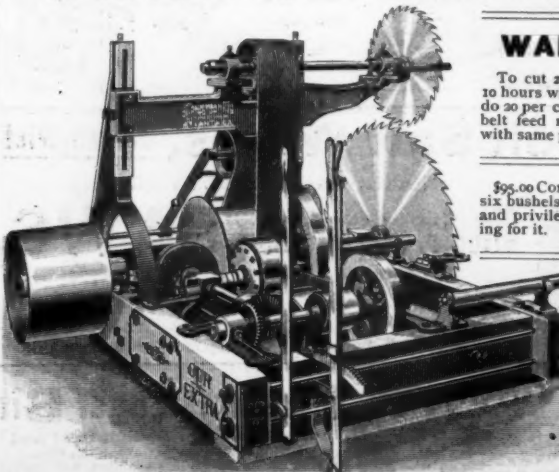
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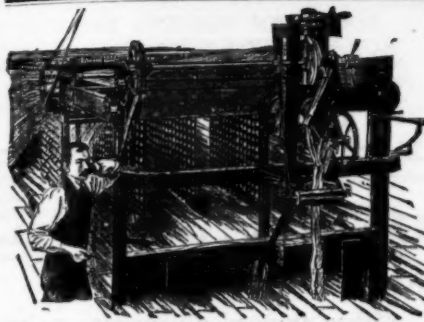
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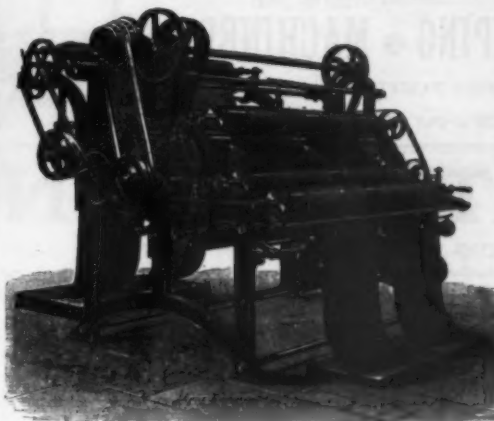
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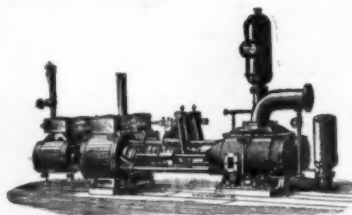


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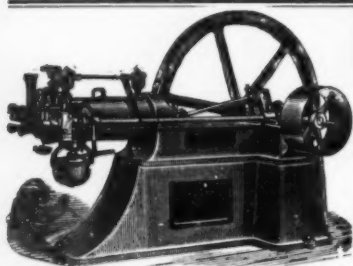
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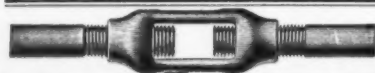
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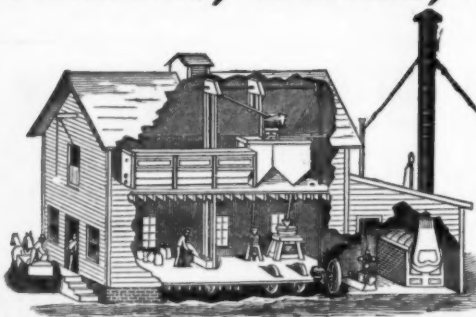
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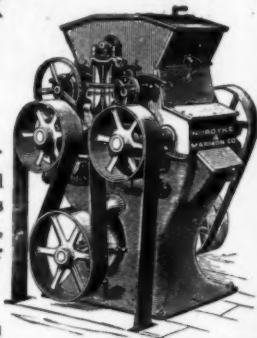
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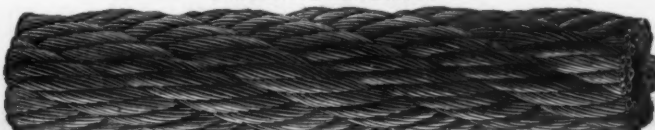
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"A syndicate of land owners here have selected 20 acres fronting railway track in West Dallas, worth \$1,000 per acre, for \$20,000, and will donate it absolutely to any parties who will establish either a woolen mill or cotton factory thereon. This city has established within four years one hundred new factories, and all are paying. All values are rapidly advancing."

## Bessemer Iron & Steel Works for the South—North Carolina Leads.

The MANUFACTURERS' RECORD learned some weeks ago of the existence of a movement to build extensive Bessemer iron and steel works at some point in North Carolina. When an effort was made to get at the details of the enterprise, the projectors readily gave us all the information asked for, but with the request that no mention be made of it until their plans had taken definite shape. The company has now been fully organized, and we are permitted in to-day's issue to present to our readers particulars of one of the most important enterprises yet inaugurated in the South, the establishment of the first furnace south of Maryland to be built wholly for the purpose of making Bessemer pig iron (though an Alabama furnace has recently made some Bessemer iron), and the first effort in North Carolina to utilize the rich and abundant ores of that State. This, however, is only a part of this enterprise. Bessemer steel rail works, rolling mill, &c., are to follow the building of this furnace. The MANUFACTURERS' RECORD has often stated that North Carolina had a practically unlimited supply of high-grade Bessemer ores, and that plans were being matured for their development on a very large scale and for the building of Bessemer iron and steel works to utilize these ores. The organization last Saturday of this \$1,000,000 company to build such a plant at Greensboro and to establish other industries there, marks one of the distinct eras in the progress of the South's industrial advancement. It not only means the beginning of Bessemer steel making, which will follow the construction of this furnace, but it means that the South will soon demonstrate that it has just as great advantages for steel making over Pennsylvania as it has for iron production.

The South has now entered upon the real work of its development. It will now bend its energies to the manufacture of steel, just as it has for several years to pig iron production, and the MANUFACTURERS' RECORD takes pleasure in making the announcement that the Old North State, rich beyond measure in iron ores, but heretofore a laggard in their development, has wheeled into line, and right at the start proposes to be the first State south of Maryland to build a Bessemer furnace and Bessemer steel rail works.

While waiting for permission to make public the projected developments, we have been making such investigations as would enable us to accompany the announcement with some information concerning the ores to be used by the company and the location it had in view. All our reports have been uniformly favorable, but we can make room for only one report to-day, and that is by Mr. Thos. P. Williams.

Ore Hill is the name of a station

on the Cape Fear & Yadkin Valley Railroad, forty miles southeast of Greensboro. In the immediate proximity of the station there is a hill several hundred acres in area, traversed by several veins of iron ore, which has been known for many years as Ore Hill. Numerous experts have examined the property and made flattering reports, both as to the quality and quantity of the ore. To learn something of it from our own standpoint we requested Mr. Thomas P. Williams, a well-known expert, to investigate and report on the property. Mr. Williams is an experienced mining engineer and geologist, who, besides having a thorough knowledge theoretically of minerals, has had thirty years' practical experience in the field and in mines and quarries in this country and Great Britain. In explanation of one or two statements in his report, it may be stated that he did not know the purpose for which he was making the investigation nor the use to be made of his report. Seeing the remains of an old furnace on the property, he thought a new one was to be built there. His report is as follows:

As per your telegram of the 5th inst., I left Morristown and arrived at Ore Hill, Chatham county, N. C., on Thursday, the 7th inst., and, after a careful examination of the Ore Hill iron mines, I hereby submit to you my report.

At the outset I will state that inasmuch as you are furnished with reports of the State geologist and eminent assayers, I will make no comments on those lines, but merely give you a practical report.

First. I have traced the veins of iron ores for about a mile, and have picked up outcrop specimens which show a splendid variety of hard ores (I enclose some specimens in a box and express it to you to-day). They are (1) brown ore or limonite, (2) semi-magnetic, (3) manganiferous and (4) semi-specular ore. Some parts of the veins show off some compound ores, and all of the ores show heavy effects of igneous actions on them during or before the upheavals, and are highly suitable to make steel goods. I suppose the average percentage of metallic iron would be about 55.

Second. The leads run nearly southeast to northwest, getting richer, I believe, towards western part of the tract. There are three veins of iron running parallel to each other. At one place there is some confusion and cross leads, which at a good depth are likely to die out, the intervening partitions being bastard iron and porphyry, intermixed with micaceous, ochreous and talcose slate. The "walling" on the west side is a mixture of gold-bearing quartz and bastard porphyry, which at a good depth, say 150 feet, from the apex, would, I believe, show a respectable percentage of gold, and probably silver also. Deposits of gold are sometimes found associated with hard iron ores, and sometimes with porphyry (as in Colorado), but, of course, more generally with micaceous slate and quartz. All these are on the Ore Hill tract, the quartz vein and the talc-quartzose slate walling being on the southeast side of the iron, and the bastard porphyry or semi-trap-rock on the northeast side, and is exposed at the old furnace.

Third. The great mineral bulk is iron, Bessemer and steel-making ores of high grades, and, unquestionably, in great abundance.

Fourth. The facilities and advantages for cheap and systematical mining are favorable, with good elevations and easy

grades to the railroad, or to a furnace; but the mining hitherto made has had no system at all; in fact, it is nothing but "butchering up" anyhow and anyhow, anywhere and everywhere. However, I could make a working plan that would turn some of the pits, shafts and entries into good account, and thus derive some gain from the old works. The basis or ground floor of operations ought to be at the lowest and nearest part to the best parts of the veins, at an elevation just high enough above water-line to have an easy grade to the surface, and connect all or some of the old shafts and entries (right and left and in front) with the lowest great main entrance or ground floor of operations; and when the ores would be mined above the basis of openings, you could then sink (incline fashion) for another deeper floor, and so on. Now, inasmuch as the hard ores here are deposited in the very uncommon position of vein style, and not in banks, strata or "pockets," as is generally the case with brown hematite and manganiferous ores, it happens in such deposits, whether ores or rocks (especially gold ores and slate rocks), that the deeper you go the thicker and richer the veins. This, I believe, would be the result here. The veins will widen at a desirable depth, and the partitions and outcrop confusions will die out to give room to a more regular, larger and richer vein or veins. The largest vein exposed shows a thickness of about 15 feet near surface. The "blossoms" of the limonites show rich, yellow ochre in the cavities of the ores, and the manganiferous ore displays a rich purple-brown ochre, which are good signs for high-grade and rich ores. I hardly think that the "specular ore" will be equal to the others in quantity.

After proper openings have been made, and with combined system and care, the ore could be mined and delivered at the furnace for 50 cents per ton, or less.

Mr. Williams estimates that these ores could be mined and delivered to a local furnace at 50 cts. a ton. Other experts believe that it is very seasonable, owing to the ease of mining and the short haul of 40 miles, to put these high grade steel ores in the Greensboro furnace at not over \$1 a ton. As the same grade of ores cost Pittsburgh furnaces more than five or six times this figure, it is easy to see the advantage that this plant will have.

THE MANUFACTURERS' RECORD published last week a significant item from the London Iron and Steel Trades Journal, in which, after referring to the low cost of the Bessemer iron that is now being made at Talladega, Ala., by a company composed mainly of English iron makers, suggested the prospects of shipments of this iron to England if the present high prices in that country continue. In somewhat the same line is the following extract from a circular letter from the American representatives of an English iron concern:

There is, however, another feature of the case, interesting, at least, and which possibly may soon become important. The present value of Middlesboro pig iron is about \$16 per ton there (since then \$17.25), whereas very much better iron—better for most any purpose—can be had for \$13 in Chattanooga or \$15 at seaboard. If these relative values are to be continued a large market in the Argentine Republic, now the center of phenomenal commercial activity, and other South American markets is certain, and shipments to Italy are by no means impossible. The effect of such a trade revolution on iron and its allied interests in this country will certainly be one of decided benefit.



### To Draw Capital South.

With a view to attracting the attention of the entire financial interests of the United States to the growth of the South, to the advantages of this section and to the opportunities for profitable investments of all kinds that are to be found in every State, from Maryland to Texas, the MANUFACTURERS' RECORD will shortly publish a "Special Bankers' Edition," a copy of which will be sent to every bank (national, State and private) in the United States, to loan and trust companies, brokers, leading insurance companies and financial institutions generally. Nothing of this character has ever before been undertaken in this country, and never before has such an opportunity been afforded to reach every financial institution in the United States. The value of this to the South cannot be overestimated. It will draw the attention of the entire banking and allied interests of the whole country to the marvellous advancement and possibilities of the South. For Southern bankers, owners of mineral and timber properties that are for sale, real estate agents, transportation lines, and all others who wish to reach the moneyed men of the whole country, this "Special Bankers' Edition" is the best advertising medium ever offered. It will result in attracting many millions of dollars to the South for investment, and in inducing many thousands of people to make a personal investigation of the advantages and the resources of this section.

### Result of Advertising.

As a result of advertising in the MANUFACTURERS' RECORD, Dr. Jno. W. Corbett has received a letter from a moneyed man in the North stating that he would like to invest \$5,000 in a manufactory to be erected in Camden.—Camden (S. C.) News.

THE Palatka (Fla.) Herald copies one week's report from our Construction Department and says this is our report of new enterprises in Florida for the past month. The Herald should post itself regarding the rapid strides its own State is making, as reported in our columns. The list it gives is only about a quarter of the month's work.

THE business activity at Anniston, Ala., is strongly evidenced by the growing advertising patronage of the Daily Press, of that city. The Press is compelled to double the size of its editions, and now appears with eight pages and 48 columns. The paper is live and well printed, and its managers are to be congratulated upon these indications of prosperity.

### Give the South a Fair Show.

The present attitude of some of the leading iron manufacturers of Pennsylvania and elsewhere in the North shows how ungrateful human nature can be. At the positive demand of these very men Congress provided a protective tariff, not only to protect them in their manufacturing enterprises, but also to protect them in their mining enterprises as well.

Since the adoption of that tariff two important events have occurred. Protection has so benefited these manufacturers that they have been enabled to establish great industries and become very wealthy, and the inexhaustible and rich iron deposits of the South have been sufficiently developed to bring their product into successful competition with the mines and furnaces of Pennsylvania and the North. Now, instead of giving the South an opportunity to benefit by this tariff and become wealthy also, these Northern manufacturers change front and demand free iron ore.

In a recent interview Major L. S. Bent, of the Pennsylvania Steel Co., of Steelton, Pa., which is building an immense plant near Baltimore, said:

"It is the manifest duty of Congress really to protect American industries by relieving its raw material of the burdens now laid upon it. I do not want to be understood as speaking from a purely selfish standpoint. Whether or not a protective tariff has built up such industries as ours is not so much of a practical question as what is the proper policy to be pursued in the present and for the future. When the great works at Sparrow Point, Baltimore, shall be in full operation the Pennsylvania Steel Co. must import 1,000,000 tons of Bessemer ore per annum. To restrict us to the home supply is utterly impracticable; there are no ores to be had at home, such as are needed for our purposes. We would have to go thousands of miles into the interior for them. To raise the duties on this ore to such a point as to protect the American mines and miners from Cuban and Mediterranean Bessemer ores would simply be to close all our works, put out our furnaces, throw tens of thousands of workmen out of employment and render unproductive tens of millions of capital.

Such talk as this is deliberate deception and ungrateful appreciation of the causes which have made the speaker the leading manufacturer that he is. Besides, this talk is based upon just what he says it is not—a purely selfish standpoint. No region in the world has iron ores in such abundance and of such quality as the South, but only a beginning has been made in the development of these ores. The proposition, then, to demand free ores of Congress is selfish, not only in its refusal to grant the South the same opportunity to get wealthy that the North has already had by protection, but selfish also in an endeavor to check the output of these Southern mines, if not close them up, by bringing them into competition with the mines of Cuba and Elba before they have had a chance to accumulate wealth. There is enough Bessemer ore in the South to run every Bessemer furnace in America, but unfortunately the Pennsyl-

vania Steel Co.'s plant, now in question, is in the lower harbor of Baltimore instead of in the heart of this Bessemer ore region of the South. The major may not base his opinions on selfish grounds, but we know human nature well enough to know that if the \$6,000,000 invested at Sparrow's Point were invested in the iron regions of the South, the major would not be demanding free ores, but the same protection for himself in the South that he and his associates have received in the North.

We of the South do not ask special favors or dispensations, but we demand the same advantages to develop our resources that the North has enjoyed. This is not selfish; it is just.

This demand for free ores is made just when it is being so fully demonstrated that the South has virtually unlimited supplies of high-grade Bessemer ores, and is getting ready to turn them into pig iron and into steel rails. Major Bent's company has been seeking to purchase Southern Bessemer ores, so the owners of Southern Bessemer properties inform us, but has been holding off trying to secure lower prices. Is the cry for free foreign ores an effort to hammer down the price of Southern Bessemer ores?

### Water Powers for Electricity.

The magnificent water powers running to waste in the South can be used to advantage for generating electricity for illuminating and manufacturing at long distances from the streams. A plant could be built on any one of scores of well-known shoals, from which the electric force could be transmitted by wire to towns a few miles off. Suppose the power running to waste in the French Broad at Asheville, North Carolina, were caught up from the current and wired to that beautiful city, it would be sufficient to illuminate streets and buildings and to run all the machinery in her factories. Many other Southern towns through which railroads run are within transmission distance of streams of sufficient volume and current for electrical purposes. The many ways in which the utilization of these running waters in the way indicated would lessen the cost of manufacturing plants and production will be obvious to most readers. The saving of space where real estate is valuable, the saving of the cost of steam engines and boilers and of the fuel they would consume, are but some of many items that now add to the cost of establishing and maintaining manufacturing industries.

Persons interested in the development of enterprises in any locality within reasonable distance of a great water power may well devote time to an investigation of the practicability and the cost of the plan thus briefly suggested.

*If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$4.00 a year.*

### Never Mind Your Rich Men.

There come to us scores of letters from would-be enterprising people telling of the advantages that surround them, but followed by complaints, of which we furnish a few examples:

"Unfortunately we can do nothing," says one writer, "because we, who are young and ambitious, cannot get the co-operation of our rich men. They have money enough and to spare, but not one of them can be induced to put any into enterprises that would build up our town."

In a more doleful tone another writes: "With all these advantages in our favor, we are handicapped by our few wealthy citizens. They won't join us in any new undertaking, but tell us to go ahead on our own hook. The fact is they are financial magnates in a small way, and are afraid that some one may be brought here to locate who will supersede them."

Our last quotation is from a correspondent who has evidently a philosophical mind. He says: "Our rich men hold back from any and everything we propose, and we cannot go ahead without them. We wished to build a cotton mill, and all who felt able subscribed for shares. Some took but one, others more, but none subscribed for more than they could conveniently pay, and from all we secured a fair capital, but not enough for the carrying out of our intention. We have half a dozen citizens who are wealthy. Everyone of them has become so since the war, and has acquired it all from business done here. Of course we expected that after we small fry had done what we could, they would furnish the balance, but when we applied to them, they refused, saying in substance, when we wish to go into cotton manufacturing we will do it ourselves, and not have every clerk, mechanic and farmer a shareholder with us, with a right to dictate how and by whom the business shall be managed. Now I, for one, don't blame those gentlemen; their money is their own; it has been honestly earned. The judgment they used in getting it must tell them how to invest it. They need not have put their declination to us quite so rudely, but there is force in it after all, for I can see that men who have made money by their own exertions must necessarily be timid about becoming shareholders with a miscellaneous number of people of diverse opinions and judgment."

THE MANUFACTURERS' RECORD's advice to all our correspondents of this character, and to all our readers who have met with similar obstacles to the furtherance of the enterprises they have planned, is: Never mind your rich men! Do what you can, be it little or much, without them. Most of the successful enterprises of our day were begun by poor men, alone or in association, and when they were made profitable and required enlargement, the wealthy were



always ready to be shareholders. We remember an incident that occurred in Georgia in 1881 that illustrates our advice. About midsummer a young gentleman of only a few years' business experience went from a certain place in that State to Atlanta to confer with the officials of the Cotton Exposition. He represented others of his age who were trying to get ahead in the world, and who thought that a fine exhibit from their town and county would attract attention to it, and increase its business and prosperity. The obstacles to that were the mayor and wealthy citizens. They had been asked to co-operate with the young men and had refused absolutely. They said that everybody was doing well enough in their locality, and that the proposal of the young men was foolish. The latter were much discouraged by this rebuff, but finally sent him to Atlanta to ascertain if something could not be done. He was advised to go home and see his associates, and get them to join him in collecting exhibits of the agricultural products, the minerals, ores and timbers of his district, and to forward them to the State Department of Agriculture for the Georgia display. He was cautioned to say nothing to the persons who had disapproved of his action, but to exercise the more energy and perseverance, for that success would win the greater approval from them if it was a surprise also. The envoy went home encouraged. The young men worked with a will. Their collection surpassed their expectations, and contributed materially to the success of the Georgia exhibit. The fame of it reached the wealthy old fogies. One excursion day they all went with their townsmen to the exposition, and no feature of it was of such interest to them as that from their own county. The mayor, his thumbs in his vest holes, a benign smile on his face, spent most of the day at that spot, inviting all who came that way to stop and "see what our city can do, sir, and what our farmers produce, sir." There has been no lack of enterprise since in that place. Its young men gained the confidence of their wealthy fellow-citizens, and have put them up to many new undertakings. Population has more than doubled, and the once sleepy old town is alive with progress.

Never mind your rich men if they are conservative and slow. They will wake up when enterprise has achieved success. Find something to do by concerted endeavor that comes within the funds at your command, then go ahead.

Don't abandon a good thing because you cannot begin on as large a scale as you would wish. In the case instanced by our correspondent, enough was subscribed to build and operate a cotton yarn mill fully as large as many that are paying handsome dividends, but the projectors had planned a much larger enter-

prise, and disappointed in that, are unwilling to engage in any smaller operation. Perhaps their rich men are wise in declining to take shares with those who evidently have but little business judgment and experience.

Never mind your rich men. Do your best and succeed, and your rich men will certainly come to you.

#### Progressive Farming in the South.

The MANUFACTURERS' RECORD watches with much satisfaction the steady progress farming is making in the South, as indicated by a close reading of exchanges. A line here and a paragraph there, although intended as mere items of news, speak volumes as to the continued enlightenment that is coming to our farmers. This is true of all parts of the South, from Maryland to Texas. These items are a source of satisfaction, as they indicate a growing independence of the South in its source of food supply.

A recent letter from a little town in Northeastern Texas stated that "this county will have plenty of hog and hominy for next year." How few the counties in the South are that can make a better showing. In Georgia a well known and progressive farmer says he makes oats at 25 cents a bushel and sells them for 90 cents, and makes hay for nearly nothing and sells it for \$17 a ton. Farmers in New York raise cows on land worth \$100 or more an acre, make butter at 27 cents a pound and lay up money every year. Farmers in the South are beginning to see that if there is money in dairying in New York under these conditions, there must be money in it in the South where good pasture land can be had at \$5 to \$10 an acre, and where most of the butter now used is imported. It requires but little more care, food and attention to raise high grade milch cows than to raise common beef cattle, consequently we are hearing every few days of herds of fine cattle in the South, Jerseys, Holsteins, Alderneys and others. Frequently we have had occasion to speak of the progress in fruit growing, and the good results coming from this are the many new canning establishments going up, as reported in our Construction Department. To the friends of the South these things are very gratifying, as they indicate a well developed growth which will make the South one of the most wealthy and independent empires in the world, an empire that can feed itself, house itself, clothe itself and yet supply in addition more than its quota of the world's supply of raw material and manufactured goods.

G. H. YOUNG, secretary Ocala Lime Co., Ocala, Fla., wants the address of parties manufacturing barrels, both stave and solid, suitable for shipping lime; also address of parties making cotton bagging sacks for shipping fertilizers.

#### Scientific Cotton Culture.

We recently referred in these columns to what promises to be a lintless cotton plant. Whether or not this plant can be raised in numbers sufficient to make it of great commercial value cannot yet be told. Several years of careful experimenting must decide that. But the fact that careful selection of seeds has brought about such results is significant and is indicative of the fact that the planters of the South are investigating for themselves in efforts to improve this staple crop.

We have just had called to our attention other experiments with the cotton plant, which promise to be of perhaps more importance, commercially, than the lintless cotton, and this is in improving the quality of the lint. These experiments have been made by Mr. W. A. Cook, of Norman, Miss. Regarding this cotton Mr. Cook writes to the MANUFACTURERS' RECORD:

I commenced to improve this cotton as to its staple eight years since by a judicious selection of the longest and best bolls I could find sufficient to plant an acre each year. When I commenced my experiments the staple was an inch-and-an-eighth long. Now it is nearly two inches long. I find, contrary to my expectations, that the staple is not only increasing in length, but also in yield. Whereas, at first, I could only make a light bale to the acre. It has increased from year to year, and this year I have gathered from one acre 615 pounds of lint. I am confident that it is susceptible of still further improvement, and I have great hopes of making it in a few years equal to the best sea island cotton.

A few such careful planters as Mr. Cook would soon put a stop to the complaints of inferior cotton, which have been numerous of late years. Those who make these experiments reap rich benefits from them, as it takes but little more care to raise good cotton than it does to raise poor cotton, while the difference in price is very considerable.

WE note with interest the special edition of the Denison (Texas) Herald. The Herald is in the field to advance the interests of Denison, and in its special issue has performed an exceptionally good piece of work. The issue consists of twelve pages of admirably written matter, with photographic views of the leading mercantile houses, public buildings, schools and churches of Denison, and the whole gives one a comprehensive view of the Queen City of the Southwest. Mr. George B. Goodwin is editor and general manager of the Herald, and is doing good work for his city and section.

THE South Atlantic, hitherto published at Greenville, S. C., has moved its office to Augusta, Ga. The latter city was thought to afford better facilities for publishing the journal, and the managers say they have substantial evidence of liberal support at the hands of the business men of Augusta.

Subscribe to the MANUFACTURERS' RECORD.

## BESSEMER IRON AND STEEL.

North Carolina Leads Off, and Will Build a Bessemer Iron Furnace at Greensboro.

To Be Followed by Bessemer Steel Rail Mill, Rolling Mill, &c.

THE RICH ORES OF THE OLD NORTH STATE TO BE UTILIZED.

An Exceptionally Favored Place for Producing Iron and Steel at Low Cost.

OTHER ENTERPRISES TO BE ESTABLISHED.

[Special to MANUFACTURERS' RECORD.]

SALISBURY, N. C., Nov. 30, 1889.

The incorporators of the North Carolina Steel & Iron Co., for which a charter was recently secured, met here to-day and organized by electing directors and officers, and announced the purpose for which the company was formed. Iron furnaces, Bessemer steel plant, rail mill and other adjunctive industries will be erected at Greensboro in this State. The high-grade ores from the famous Ore Hill property, 40 miles southeast of Greensboro, on the Cape Fear & Yadkin Valley Railroad, will be used. Coke will be brought from Eastern Kentucky by the Western North Carolina Railroad, or from Virginia by the Norfolk & Western and the Cape Fear & Yadkin Valley, which two roads will within a year connect at Mt. Airy. Other roads are now building and still others projected through Western North Carolina to the coking coal fields of Southwest Virginia and Eastern Kentucky. Greensboro was fixed upon because of its central location, its important railroad connections, its equable climate and remarkable healthfulness, its thrifty, enterprising and progressive spirit, and its unsurpassed advantages for general manufacturing. It is on the main line of the Richmond & Danville system, one of the greatest of the North and South lines. It is on the Cape Fear & Yadkin Valley Road, which, with the completion by January 1 of the extension from Fayetteville to Wilmington, and the connection to be made next year at the State line near Mt. Airy with the Norfolk & Western, will be an East and West trunk line furnishing connection with the West and a tidewater outlet. Another outlet to the sea will be afforded by the road the Richmond & Danville Co. is now building from Raleigh to Norfolk. The Winston and Wilkesboro branches of the Richmond & Danville, penetrating the Bessemer ores of Western North Carolina, have their starting point at Greensboro. Southeast of Greensboro are hundreds of thousands of acres of magnificent timber, uncultured, long leaf pine and several varieties of hardwoods.

With the impetus given it by this enterprise, and with its advantages for iron and steel making and the manufacture of products using these as raw material, its advantages for wood-working shops of every sort, for textile industries, and for manufacturing in general, together with its attractions as a place of residence, Greensboro ought to become one of the most important centers of industry in the South, the industrial and commercial metropolis of North Carolina. The following are the incorporators of the company:

James B. Pace, president Planters' National Bank, Richmond, Va.; B. B. Osler, Esq., Q. C. Attorney for the Canadian government, Toronto, Canada; Col. A. B. Andrews, third vice-president Richmond & Danville Railroad, Raleigh, N. C.; Col. Wm. E. Anderson, president Citizens' National Bank, Raleigh, N. C.; Col. Julius A.



Gray, president Cape Fear & Yadkin Valley Railroad, Greensboro, N. C.; Wm. Richards, of Richards Bros., furnacemen and iron ore dealers, Chicago, Ill.; Prof. Chas. D. Wilber, late Geologist of Illinois, Chicago; Hon. John S. Henderson, Member Congress 7th District North Carolina, Salisbury, N. C.; J. J. Newman, M. E., Salisbury, N. C.; Hon. Theo. F. Kluttz, attorney-at-law and president Yadkin Railroad, Salisbury, N. C.; Major James W. Wilson, chief engineer K. C., G. & L. Railroad and of W. N. Railroad, Knoxville, Tenn.; Dr. D. W. C. Benbow, director Cape Fear & Yadkin Valley Railroad, Greensboro, N. C.; Samuel H. Wiley, Esq., president Davis & Wiley Bank, Salisbury, N. C.; George S. Scott, Esq., president Richmond & Danville Railroad Co., New York, and Jas. A. Odell, president Odell Hardware Co., Greensboro.

At the meeting of the incorporators they elected the following directors: George S. Scott, Col. A. B. Andrews, James A. Odell, of Greensboro, N. C., Theo. F. Kluttz, Saml. H. Wiley and J. J. Newman.

The following officers were elected: James A. Odell, president; J. J. Newman, vice-president and general manager; Saml. H. Wiley, secretary and treasurer; Thos. F. Kluttz, attorney. Executive committee: James A. Odell, Col. A. B. Andrews and Col. Julius A. Gray.

The capital stock was placed at \$1,000,000. Books of subscription were ordered to be opened at Davis & Wiley Bank, Salisbury, N. C.

Stock to be issued in shares of \$100 each at par, payable 25 per cent. cash on subscribing, and balance in five equal payments of 15 per cent. each every two months thereafter. A large part of the stock has already been taken.

The company has secured the famous "Ore Hill" and other iron ore lands amounting to some 2,000 acres in Chatham and Moore counties, N. C., on the line of the Cape Fear & Yadkin Valley Railroad, 40 miles from Greensboro; other magnetic iron ore lands in Western North Carolina, ample limestone at Germanton, Stokes county, N. C., 35 miles from Greensboro, on line of Cape Fear & Yadkin Valley Railroad, besides other franchises and about 2,000 acres of land in and around the city of Greensboro, which is to be laid off in streets, building lots, manufacturing sites and parks.

The company will at once proceed to erect at Greensboro a 150-ton daily capacity iron furnace plant for the manufacture of Bessemer pig iron, to be followed by others, with a steel plant and rolling mills for making steel rails; these plants to be at Greensboro. The company will foster and encourage all kinds of industries, and will make Greensboro a large manufacturing city, because, situated as it is, with its railroad connections, making it accessible to large bodies of the best kind of Bessemer ores, limestone and coke, it is estimated that Bessemer pig can be made there at \$8 per ton. Iron has been made from these "Ore Hill" ores ever since before the Revolutionary war. Over 25,000 tons of charcoal pig have been made from these ores.

The Confederate government appropriated several millions of dollars towards making these iron ores available for war purposes, and the work on them was only stopped by the close of the war. The ores consist of brown hematites that average 56 per cent., red hematites that average about 60 per cent., and magnetites that average about 60 per cent., all of which are practically free from phosphorus and are low in silica, besides the famous black band ores.

The average run of pig made at the "Ore Hill" furnace in April, 1865, was 63 per cent., which shows what the ores will do.

These properties have been favorably reported on by such men as Prof. Emmons, Commodore Wilkes, Prof. Genth, Prof. Shaf-

fer, Prof. Kerr, Prof. Wilber, George G. Francis, M. E., S. A. Richards, Smith, Newman, Thos. P. Williams and many others, and from working and analyses of the ores show them to be in large bodies and high grade pure ores, from which to make high grade pig metal and steel.

This much for the ores. This company, located at such a prosperous city as Greensboro, with all its various advantages, backed by the fostering care of the Richmond & Danville and the Cape Fear & Yadkin Valley Railroads, officered by such men as are to control its management, cannot fail to be anything than a grand success and the pioneer of such a branch of manufacturing industry as will bring further attention to the South, and wake up the people of North Carolina to some of the advantages that this State has in the manufacture of steel from the vast bodies of Bessemer ores.

### Activity at Fort Payne.

FORT PAYNE, ALA., Nov. 30, 1889.

There is always something new to note at this busy Southern hive of industry. Last week the city was invaded by a party of New England gentlemen, who backed their faith in the city's future by taking stock in the plant of the Bay State Furnace Co. The new company proposes to construct a 100-ton furnace, and more than half of the stock was taken on the spot.

And this is not all, for it is almost certain that Fort Payne will have a third furnace. A proposition has been made to the Fort Payne Coal & Iron Co. by a party who has ample means to take a large share of stock in the fund for a new furnace of 100 tons capacity. He is assured of the support of a sufficient number of investors, and the chances are good for the execution of this project.

Governor Goodell, of New Hampshire, has happily styled Fort Payne the "Electric City." When one recalls the fact that the town has come into public notice within the past year only, he is prepared to approve of Governor Goodell's suggestion.

But it is highly important that the outside world should understand that Alabama, and this section of the State particularly, does not offer inducements to the iron and steel trade only. On the contrary, wood-working, tanning, shoe and leather plants, machine shops, cotton and woolen mills, car shops; in short, all the applications of iron, wood, wool, cotton and leather are here thoroughly practicable with the best assurances of profit. The latest volunteer in the army of Fort Payne's busy workers is Mr. J. H. Straight, of Belknap Falls, Vt., who has concluded, after personal investigation on the spot, to remove his sash, door and blind factory to Fort Payne, and also establish here an extensive paint factory.

ONE of the most promising towns in East Tennessee is Morristown. The MANUFACTURERS' RECORD has frequently called attention to its many advantages, its fine climate, its excellent railroad facilities, its nearness to abundance of raw material—fine iron ores, marble, coal, coke, hard and soft woods, fire-clay, ochrous slates, &c. Recently Hon. Abram S. Hewitt, of New York, had his attention called to Morristown and its rich resources. Mr. Hewitt examined some specimens of iron ore from the vicinity of the town, and, in expressing his opinion, said:

"So far as I can judge from the specimens, and that is not much, the region is all that its friends believe it to be. I think Morristown is a very excellent point for carrying on the iron business."

Such an opinion must be a source of satisfaction to the people of Morristown, and it foretells what we have always claimed for the town—that it is destined to take a high stand as a manufacturing center.

## DENISON, TEXAS.

### The Possibilities of the Lone Star State.

#### The Growth of Denison in the Past and the Brilliant Prospects of its Future.

[Spec. correspond'ce MANUFACTURERS' RECORD.]

DENISON, TEXAS, Nov. 29, 1889.

The story of Texas, as told in the last census, was a revelation to the rest of the Union, for the evidences of the growth of this imperial Commonwealth during the decade of 1870-80 were simply startling. But the record of 1880-90 will prove even more profoundly impressive, for the progress of Texas is in geometrical ratio, and the close of the century will find the Lone Star State easily first in the American Union. The population of Texas is more cosmopolitan than that of any other Southern Commonwealth, and her vast area and magnificent possibilities give her advantages possessed by no other State in the Union, for, should her limits ever become crowded, her very waste places can be made to smile and reward the labors of their occupiers. The cities and towns of Texas are fully alive to the demands of the times, and are displaying pluck, confidence, energy and enterprise befitting the most progressive of American communities. Dallas, Fort Worth, Houston, Galveston, San Antonio, Waco, Laredo, El Paso, Denison, among the larger cities, are growing at a rapid pace, and surprise the stranger with their modernness, their solidity and the metropolitan spirit of their citizens. Without disparagement to any of these "hustling" communities, some mention of Denison, "the Gateway City of the Southwest," may not prove amiss, in view of the notable influx of Northern capital of late into its channels of trade and industry.

Denison, the county seat of Grayson, one of the richest and most populous counties in Texas, is located on the northeastern edge of the State, three miles by rail and less than a mile by road from the Indian Territory. It is a *post-bellum* town, for seventeen years ago it was a surveyor's camp. Where the Missouri, Kansas & Texas Railway first reached the soil of Texas, Denison was located, the town being named after the vice-president of that railway. Denison was admirably planned. It is elevated 200 feet above the level of Red river and 800 above that of the gulf. It is platted as regularly as a chess-board, with streets and avenues from seventy to one hundred feet wide and sidewalks with a minimum width of fourteen feet. Twenty-foot alleys run parallel with the streets, and a complete system of sewerage is in process of construction. The population, thoroughly cosmopolitan, numbers 17,000. There are numerous and well equipped public and private schools, and nine churches of various denominations. The city is lit by arc and incandescent lights and gas, has water works, a paid fire department, an efficient police organization, ample banking facilities, street railways and a motor line, standard gauge, six miles long, operated by Baldwin motors, substantial and imposing business structures, well supplied markets, in short, all the requirements and characteristics of a live American community.

The country around Denison is one of the finest cotton, fruit and vine-growing regions in the world. The climate has been likened to that of Piedmont and Lombardy, the fairest in all Italy. The steady development of the agricultural resources of the surrounding country would alone render Denison an entrepot for the trade of a vast region, but the city has a higher and grander destiny. Right at her doors are the wonderful Choctaw coal beds,

whose value for coking purposes is unsurpassed, while to the southwest of the city, within ready reach by rail, is a bed of hematite ore eighty miles in length, claimed to be so nearly pure that it can be worked direct from the furnace into molds, water pipes, etc. To the south lie the great Llano Bessemer steel ore deposits. These are magnetic ores, low in phosphorus and free from sulphur, and reckoned superior to the best Michigan ores. This ore is found in heavy fissure veins, and is believed to be practically inexhaustible. Cheap iron and cheap coke! What more is wanted but ample transportation facilities (and these are assured) to make Denison a steel and iron center? Wood-working, too, in all its branches, may profitably be prosecuted at Denison, since an ample store of cabinet woods and building lumber is within easy reach. Cotton and woolen mills, too, would find limitless supplies of raw materials as well as tanneries, canning factories and other establishments. The perfection attained by refrigerating and ice-making apparatus and the possibilities of cold storage must, in the near future, revolutionize the slaughtering and meat-packing industries, and this alone must largely redound to the profit of Denison, standing, as she does, in the midst of the greatest grazing tract on the continent.

The importance of Denison from a railroad standpoint may be perceived when one learns that the Missouri, Kansas & Texas, the Houston & Texas Central, the Denison & Southeastern, the Gainesville, Henrietta & Western and the Denison, New Orleans & Bonham traverse rich cotton, grain, timber, coal, iron and grazing regions center here, while such great systems as the Santa Fe, the Rock Island, the St. Louis & San Francisco and the Texas Pacific and other railways must soon or late do likewise. Denison is the gateway to the Indian Territory, the complete opening of which is but a question of time. There will come a demand for the coal stores of the territory that cannot be resisted, and Denison will be the central distributing point for the output of the mines. The Choctaw Coal & Railway Co. is about to build from its junction with the St. Louis & San Francisco to Denison. The Denison & Washita Valley Road is graded and tracked for a considerable distance and will ultimately be completed. This road will give access to the coal and granite beds of Indian Territory, and its early completion is of obvious importance. Denison already presents a goodly array of diversified industries among which may be noted the largest canning factory in the Southwest, two marble-working concerns, railway machine works, two machine shops, railway repair shops, the largest cotton press in Texas, an ice factory, 60 tons daily capacity, soap factory, bottling works, two steam laundries, a large cotton gin and a hornware factory. Negotiations are in progress for a pulp mill, a carriage factory and a chair factory. There are already established three planing mills, an iron foundry and brick yards, one a large steam plant. The new Exposition building and the Alamo hotel, now building, are the most notable of the new structures. A 25,000-spindle cotton mill to cost \$500,000 is now assured, and a \$2,000,000 steel plant is expected to be put under way at an early day by a Northern syndicate which have options upon 2,500 acres of land in North Denison.

The city disclaims having a "boom," as "booms" go, but a great impetus has been given to its growth of late by the operations of the Denison Land & Improvement Co., W. P. Rice, president; Col. Milton H. French, vice-president and general manager, and Arthur L. Berry, secretary and treasurer. The company is made up of Northern men, mostly from New England, and has a paid-up capital of \$1,200,000.



While hardly the discoverers this company may be regarded as the makers of Denison, for to its members the city owes much of the attention which she is now attracting. The company is not a speculative concern, but an association of earnest, thoughtful and prudent business men who are in the field to succeed by legitimate methods, and who hold their already large acquisitions merely as a means to the ultimate end of their enterprise—the upbuilding of Denison by constituting it a great industrial center. Their spirit is shared by the community, and as a consequence property may be secured here at reasonable figures and on easy terms. Such men as Charles A. Dana, Alex. K. McClure, Secretary Windom, Vice-president Morton and others of as good judgment have spoken in so positive a manner of the possibilities of Denison that it seems a work of supererogation to set them forth in detail. This hasty summary does but a measure of justice to the theme, but the people here are convinced of the city's great destiny, which to them is "manifest."

## CHARLOTTESVILLE, VA.

### A Grand Place in Which to Establish a Home

#### Or to Build Up Almost Any Sort of an Industry.

[Spec. correspondance MANUFACTURERS' RECORD.]

CHARLOTTESVILLE, VA., Nov. 29, 1889. This is a fascinating old town, with its imposing university buildings, many cosy homes and general appearance of thrift and contentment. It has a dignified air about it that impresses one who first looks about it. The spirit of Jefferson's highest ambitions and hopes for the place must still hover over it.

Charlottesville is an ideal town in which a man with means would wish to settle down and enjoy the society of his family and his friends, and perhaps as a business establish some industry which requires the better class of labor. In the not very distant future this town will be to Virginia what Worcester is to Massachusetts—not a place in which raw materials are roughly shaped, but in which the roughly shaped materials will be made into the finest kinds of wares. With a naturally highly intelligent class of people, and such a grand school as the Miller Manual Labor School to furnish skilled labor, Albemarle county must be a seat of fine industries; and Charlottesville, as the social, industrial and railroad center of the county, will be the seat of most of these industries.

A very instructive pamphlet, circulated by the board of improvement of this town, tells too modestly the claims this place has for the attention of the world. These claims are:

"Unequalled climate, neither too warm nor too cold. Southern suns are too hot; Northern, too cold. A minimum of fatal diseases. Nearness to the seacoast, with great and increasing facilities for transportation, North and South. Cheapness of lands. Great capabilities of self-support, having minerals, timber, materials for fabrics and with unexcelled water-power for factories. Great diversity of soils, thus allowing the farmer to engage in almost any branch of agriculture, and deep soil susceptible of a high state of cultivation. Well watered with natural springs. A variety of valuable mineral waters. Well timbered. Fine public schools. Its advanced schools and the University with such a degree of excellence as to be patronized by all parts of the country. The Miller Manual Labor School, which maintains and educates the orphaned children of citizens of the county, and taxes, which are less than one per cent. per annum."

The marvellous fertility of land here is too well known to need repeating, but it is not generally known that near this place are rich deposits of iron ore, both red and brown ores, and magnetites. These ores

have assayed 55 per cent. of metallic iron, with only a small fraction of one per cent. of phosphoric acid and a trace of sulphur. Very fine slate is found here, and the finest slate pencils in the market are made here. Building stones of rare quality and unlimited quantity is everywhere. Considerable soapstone is dug here and shipped to the Northern markets. Among other minerals that have been found are graphite, fine clays, zinc, rich limestone, etc. All the valuable woods are at hand, and what is most important to a growing town like this, there is an abundance of intelligent labor.

I have found the people here imbued with progressive ideas. They know that the town has every advantage to make it a leading industrial center, and they propose to make it such. For generations Charlottesville has been a leading educational center. The people here, therefore, are intelligent above the usual order, and it is the opportunity to secure such labor as this that will do much toward attracting industries here.

Very few of the larger cities of the South that I have visited can offer inducements equal to Charlottesville for industrial enterprises. It has gas, electric lights, a street railway and the best of railroad facilities; in fact, every inducement that a large city can offer, without many of the accompanying inconveniences. Several industries have already established themselves here, and their success is a good guarantee that others will be forthcoming.

H. L. ALDRICH.

## ON WINYAH BAY.

### A Seaport City of the Pines.

#### Georgetown, S. C.—Its Advantages and Attractions.

[Spec. correspondance MANUFACTURERS' RECORD.]

GEORGETOWN, S. C., Nov. 27, 1889.

To locate the town from which I write many of your young readers will be compelled to consult their geographies, and then to understand the town's past they must go to the pages of the Revolutionary history. There they will find that no unimportant part was played in that great struggle for human rights and liberties by the people who claimed this place as their home, and to-day there still stands a house whose owners point to holes in its wooden shutters which tell of the passage of bullets from the guns of King George's soldiers. It is not, however, my intention to delve into the dim past for facts about the town, but to give a brief outline of its present and to foreshadow what it may be if its fortunes are guided aright by its citizens. I say if guided aright, for the day has gone past when a town's people could sit supinely by and trust to natural attractions to bring about its growth. It requires live men and active work to show to those contemplating a change of location the advantages one place has over another. This fact, I think, many of the business men of Georgetown appreciate, and to that end they are using their best endeavors to make the many advantages of the place known to the outside world.

Located on Winyah bay, at the mouth of five great rivers whose waters drain a large portion of South Carolina and extend even into the old North State, all of which rivers are navigable for a long distance above the town, and with from sixteen to eighteen feet of water at her wharves, Georgetown is indeed admirably situated, and should become an importing and exporting center and command an extensive inland trade. Between the bay and the ocean a bar has formed which will not allow the largest ocean vessels to pass, but the government is now at work removing this obstruction, and when the work is

completed nothing will stand in the way of Georgetown's getting a fair share of the commerce of the world. At present a large coastwise trade centers here, and though a town of but 3,000, her trade reaches into the millions annually. I have not space to go into the details of this business, but the Board of Trade recently issued a book setting forth the facts, which will be sent upon application to those interested.

The fisheries are one of the most important industries of the people, shad being the principal, though oysters are largely cultivated. The value of this product is nearly \$100,000 annually.

The lumber and turpentine interests are enormous, as a very large portion of the country along the rivers and coast is covered with virgin forests of pine, oak, poplar and cypress, and it is only within recent years that these resources have been utilized.

Rice is still very largely cultivated, though the plantations are not nearly as large as in the olden times, but the loss in trade in this product is far more than balanced by the advantages of the new departures. The manufacturing interests of Georgetown are represented by lumber mills, shingle mills, rice mills, etc., at present. A new furniture factory is being erected at a cost of about \$20,000; ground has been purchased for another shingle mill, while a portion of the stock has been already subscribed for a barrel factory.

All sorts of wood-working factory will pay here, and pay well. The cheapness with which all classes of lumber can be brought to the mills from the interior, and the unexcelled facilities for exportation render the profit a foregone conclusion. Letters addressed to the Board of Trade regarding any of these industries will receive prompt attention.

The Georgetown Western Railroad connects the town with the Atlantic Coast Line system, thus giving direct and rapid transit both North and South, and with the excellent connections of that system to all parts of the country. One can leave here at 4 o'clock P. M., and taking a "Pullman" at Lane's on the Atlantic Coast Line, forty miles from here, reach New York at 5.30 P. M. the next day, without leaving his car, passing through Richmond, Washington, Baltimore and Philadelphia en route.

As a winter resort Georgetown is known to all lovers of sport. Game is abundant, and the climate so mild that its pursuit can be continued without discomfort at all times, and the people here are always ready to welcome with open hearts and houses those who come here to seek recreation. I might also speak of the advantages it enjoys in "Pawley's Island" for summer residents, but as that would be a little unseasonable I will refrain; still, it might not seem unseasonable to one from the North, as thousands of roses are yet in bloom in the open air, and their fragrance and beauty delight the senses of the traveler. A visit will well repay anyone for the time and expense, and leave pleasant recollections for many a day.

JOHN F. COFFIN.

### Bessemer Steel Ores at Morristown, Tenn.

MORRISTOWN, TENN., Nov. 25, 1889.

Editor Manufacturers' Record:

I will not dwell in this letter on the natural advantages and facilities of Morristown as a healthy place and as a railroad center, or the wealth of its surroundings in marble, slate, zinc, lead, antimony, timber, etc., but confine myself to the wonderful variety of steel making ores that exist in abundance in this region.

Within a mile of Morristown is a great lead of undeveloped brown ore, which runs northeast to southwest for several miles. The outcrop ores from two points on this lead have been recently analyzed by Prof. Robt. C. Price, of the Miller

Manual Labor School, of Virginia, which shows, as stated in the MANUFACTURERS' RECORD of November 16, 1889, a percentage of 55 and 56 of metallic iron. This is certainly high and good for outcrops of limonites, especially as they are perfectly free from phosphorus and only a "trace" of sulphur.

About three miles from Morristown I discovered a well refined vein of magnetic iron ore. Prof. Price gives the analysis of this magnetite at 66 per cent. and free from phosphorus and from sulphur. I have traced this vein for over seven miles.

The analysis on samples of outcrops of bodies of manganese, which are deposited on a chain of hills, three miles from Morristown, show an average of 65 per cent. of "manganese dioxide." Another lead shows 53 per cent. of manganese dioxide.

To have high grade limonites, magnetites and manganese—as per above-mentioned assays—and have them in abundance, and all within from one mile to four miles, is a sufficient proof that Morristown is a good central spot to erect iron furnaces to reduce the ores, and produce different grades of iron and steel goods.

When we consider the quality of these ores, and that the Pocahontas coke of Virginia goes through Morristown to Alabama, it is evident that this point would have an important advantage for iron and steel making, especially when coking coal is known to exist and will be developed at Middlesborough, which is only 45 miles distant, and also plenty of charcoal timber all around the town.

After thirty years' experience in the mining and quarrying business, over five years of which I spent in exploring, &c., in North Alabama, North Georgia, North Carolina, East Tennessee and elsewhere, I can say that I do not know of any other place in the South that has such good prospects before it as Morristown.

With all the good names that certain iron districts have in the South, Morristown may yet be its real Pittsburgh.

Within a radius of 50 miles, unlimited quantities of brown ores, specular ores, fossiliferous ores, magnetic ores and manganese ores, and manganese exist; all of which could be concentrated at Morristown more cheaply, in my opinion, than at any other point in the South. Also this area abounds in a great variety of marbles, granites, ochres, clays, lithographic stones, building stones, limestones and green and buff color slates for roofing and for flooring purposes.

At a certain place—a junction of formations—10 miles from Morristown, are good indications of petroleum and gas.

The immediate surroundings of Morristown have abundance of high grade brown ores, magnetic ores and manganese. These deposits have never been developed or touched, except a couple of pits some years back, one of which—a small top-cut—yielded over 700 tons; which was carried to a furnace 250 miles from Morristown.

The fact that this region of Morristown is practically undeveloped and untouched, and the fact that large bodies of "steel ores" exist so near the town, show clearly the desirability of erecting a furnace or furnaces to reduce the ores and turn them into steel goods and into large profits.

Anyone who will look at the map of the Southern States, will find that Morristown is about the center of the mineral ore region of the South, and my explorations during the last seven months have convinced me that it is about the richest portion. It already has two trunk lines of railroads, with others in prospect.

These are plain facts with no "coloring," and which experts can verify by visiting Morristown.

THOS. P. WILLIAMS, M. E.

Subscribe to the MANUFACTURERS' RECORD.  
Price \$4.00 a year or six months for \$2.00.



# SALEM, VA.

IN THE ROANOKE VALLEY.

THE SWITZERLAND OF THE SOUTH.

*Its Superior Social,  
Educational and Industrial  
Advantages.*



DUVAL HOUSE—Erected in 1873.

*Salem Improvement Company  
will begin to Sell Lots  
December 11th.  
Manufacturing Sites Free.*

**LOCATION.**—Salem, the county seat of Roanoke county, is in the heart of the Roanoke Valley, celebrated throughout the country for its fertile soil, picturesque mountain scenery and unsurpassed climate. Situated on the Roanoke river, between the Blue Ridge and the Alleghanies, at an elevation of 1,100 feet above the sea. The natural drainage is perfect, there is no malaria and the healthfulness of Salem is proverbial. Salem is central to the Mineral Springs region of Virginia, and is a noted and popular summer resort, the hotels being unusually good.

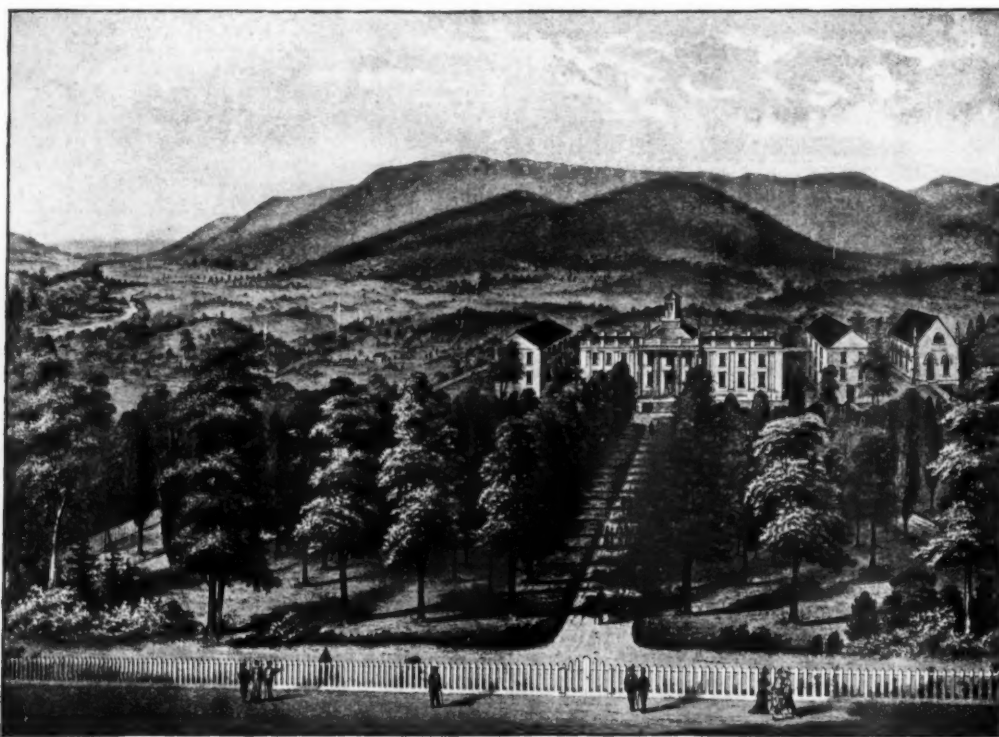
**RAILROADS.**—Salem is on the main line of the Norfolk & Western Railroad, and is the chartered terminus of the Valley branch of the B. & O. Railroad, which is already graded to Salem and which business men claim will soon be completed to this place. A dummy line to connect Salem with Roanoke City (seven miles east) is under contract to be completed by May, 1890.

**WATER WORKS.**—The town owns a complete system of water works, with an abundant supply of pure mountain water. In connection with the water supply an efficient fire department renders property in Salem comparatively safe.

**POPULATION.**—Salem has a population of about 2,500, and is justly noted for the

**NEW ENTERPRISES.**—The Salem Improvement Company, organized October 1, 1889, J. W. F. Allemong, President; authorized capital \$1,000,000. Of this amount only \$300,000 has been issued, which has all been taken and is already selling at a premium. This company owns about 900 acres of land in and adjoining the town. This property is rolling, thoroughly drained and well adapted for business houses and residences. Wide streets and avenues have been laid out and lots will be placed on sale at noon December 11th. About 100 acres of level land between the railroad and river front (fully a mile) is set apart for manufacturing establishments and sites are offered free.

The Salem Furnace Company, D. B. Strouse, President, has been organized with an authorized capital of \$2,000,000. Of this amount only \$250,000 has been issued. The furnace is let to contract and work already begun. This company owns 2,700 acres of iron-ore land near Salem. The Noyes Brick Works, of Washington, D. C.—capacity 50,000 a day—have already been moved to Salem to aid in meeting the demand of contractors and builders. The Land, Loan and Trust Company, of Salem, was chartered November 13, with an authorized capital of \$500,000; George Allen, Manager and Secretary.



Founded In 1853.

ROANOKE COLLEGE.

Catalogue Free.

social refinement, cordial hospitality, general intelligence, high moral tone and religious character of its inhabitants. It has always been very popular as a place of residence.

**CHURCHES AND SCHOOLS.**—There are eight churches, two flourishing public and several private schools. A commodious brick building for the graded school is about completed. Salem is the seat of Roanoke College, which has handsome brick buildings on ample and beautiful grounds, a library of 17,000 volumes and students from many States, Indian Territory, Japan and Mexico. The illustrated catalogue of 55 pages and further information will be furnished on application to the president, Dr. Julius D. Dreher.

**ESTABLISHED INDUSTRIES.**—The industries already established are the Camden Iron Works; two Roller Flouring Mills; Sash, Door and Building Establishment; two Carriage and Wagon Factories; a Tannery; several Fruit and Vegetable Canners; Grain Cradle Factory; a Furniture Factory; two Chair Factories, and three Brick Yards. The Farmers' National Bank of Salem is one of the best managed banks in the country. The *Times-Register* has a large circulation and a well-equipped job printing office. There are also located in Salem the principal offices of the Bonsack Machine Company (capital \$1,000,000), the Comas Machine Company (capital \$100,000) and the South Birmingham Coal & Iron Company (authorized capital \$1,000,000).

Among the numerous improvements projected is a large brick building for the offices of the Improvement and Furnace Companies and for a Banking and Building Company, soon to be organized, with a capital of \$150,000. A site has already been given for a large "Bee-Hive" Power Plant (for small industries) with a capital stock of \$50,000. Many persons are prospecting here for sites for extensive manufacturing enterprises of various kinds. **Manufactories are exempt from taxation for five years.**

Property owners and real estate agents also now offer for sale lots in the town, land adjoining it and farms in the vicinity. Prices are advancing and now is the time to buy.

**MINERALS, TIMBER, WATER-POWER, &c.**—Immense deposits of iron and other ores lie near Salem and throughout this county and section of Virginia. The supply of coal and coke is cheap and inexhaustible. The mountains are well timbered and there are also tracts of timber lands in the valley. The Roanoke River will furnish water-power for many large enterprises. Labor is cheap and all the conditions are favorable for building a large and prosperous manufacturing city.

For circulars and further particulars address

**WM. T. YOUNGER,**

Mayor of Salem, Virginia.

**J. W. F. ALLEMONG,**

President of Salem Improvement Co.



# SOME SPECIAL CLAIMS

POSSESSED BY

# LIBERTY, VA.

TO THE FAVORABLE CONSIDERATION of all classes of prospectors, whether for homes, for investment of capital, for health, or for business enterprise. With the ensuing scholastic year will be opened the superb building of the Randolph Macon Academy, of which a cut is herewith presented. This institution is built for the thorough culture of boys—mental, moral and physical—is under the efficient management of Prof. W. W. Smith, LL.D., president of the Randolph Macon College at Ashland, Va., and has been constructed regardless of cost, to secure every condition essential to the successful attainment of its objects according to the most approved modern standards. Such another educational institution does not exist in the broad limits of the Southern States. In addition to this two handsome Female Academies, constructed upon the same intelligent, liberal and progressive principles as the Randolph Macon Academy, will be built during the coming year, and, if possible, receive pupils in September, 1890. Besides these, Liberty already possesses

shipping facilities and all the climatic, social, sanitary and pecuniary conditions requisite to the retention of skilled artisans once engaged in their employment. The manufacturers of tobacco, woolen goods, etc., already established here have found the local advantages so great that they have refused every inducement offered them to move to other points.

Every reasonable concession will be made to parties seeking locations for the establishment and operation of manufacturing plants, and upon application to the undersigned specific information will be furnished as to all details, both regarding the natural merits of the location, the character of raw materials within easy access and the terms offered to *bona fide* prospectors for sites.

Few better opportunities have been offered investors in Southern properties than the lands immediately adjacent to Liberty—lands possessing the intrinsic merit of natural fertility and productiveness in addition to close proximity to an embryo city,



RANDOLPH MACON ACADEMY.  
LIBERTY, VA.

the usual quota of public and private schools, for which progressive Southern towns are noted.

These institutions insure an intellectual and moral tone in its society to the residents of Liberty that must give it pre-eminent attractions over mere manufacturing centers to the best class of settlers.

As a special recommendation to investors, Liberty possesses all the advantages of close proximity to the ore beds and coal fields of the famous mineral region of Southwest Virginia, is the county seat of Bedford, itself an unexplored mine of mineral wealth, representing granite, limestone, steatite, kaolin, the hematite and magnetic iron ores, asbestos, mica, graphite, mineral paints, fire-clay, &c.

Manufacturers would find here, within easy access and at low cost, all the raw materials used in their business. Cheap labor in great abundance, cheap fuel, excellent

bleamed with all the elements essential to steady and permanent growth. Some of these lands are already in the hands of improvement companies and have been laid out in beautiful, wide, shady avenues and divided in lots to meet the requirements of those desiring to build or to invest on a modest scale.

Liberty invites the closest scrutiny of its claims and does not require to indulge in extravagance or deception. Its growth is inevitable. With a superb climate, grand and imposing scenery, a surrounding country of great productiveness, invigorating mountain atmosphere, an unlimited supply of the purest free-stone water, unsurpassed healthfulness, good society and the finest schools for both sexes, enterprising and successful manufacturers, close proximity to the markets of the world, cheap labor, cheap lands, excellent shipping facilities, it lacks nothing but more people to make it a model city.

For Information address { J. LAWRENCE CAMPBELL, Secty. Liberty Improvement Co.  
R. KENNA CAMPBELL, Manager Longwood Park, Va.



# 200,000,000 TONS OF BROWN IRON ORE

IN SIGHT AT

# BLUFFTON,

HIGH, HEALTHY AND HONEST.

GOOD PEOPLE AND GOOD WATER.

## Cherokee County, Ala.

LOCATED UPON THE ALABAMA DIVISION OF THE EAST TENN. VA. &amp; GA. RY. SYSTEM.

It is impossible to describe by words the enormous quantity of iron ore that is in sight on the land of this company. Said a prominent railroad man of the South: "I could not believe your statement as to the quantity, (200,000,000 tons in sight), but now that I have seen your ore deposits, I wonder how you put so low an estimate on them."

Prof. Robinson, of Bowdoin College, Brunswick, Maine, says: "I found at Bluffton iron ore in abundance, partly in solid cliff masses containing hundreds of thousands of tons, and partly in the form of gravel and small boulders lying in great banks similar in appearance to the gravel banks of New England. Whether there was as much of the gravel as of the bluff ore I could hardly judge, but it was very clear that the quantities of both were simply enormous."

G. S. Patterson, mining engineer, of Anniston, Ala., reports: "The amount of ore in sight was certainly beyond my expectation, though I was prepared to find a large deposit. The Bluff, as it is called, is a solid mass of ore on the side of a mountain, easily approachable, and can be mined cheaper than at any point in Alabama or Georgia, with which I am familiar."

Mr. Wm. H. Edmonds, of the Manufacturers' Record, says: "As to

the quantity of ore here, I don't suppose that all the furnaces in Alabama could use it up in a lifetime."—See Manufacturers' Record May 18, 1889, article entitled "BILL ARP AND BLUFFTON."

Ore can be delivered at furnaces built here at a cost not exceeding 50 cents per ton.

With high grade ores, analyzing over 50 per cent. metallic iron, delivered at the furnace at the above-named price, is there any possibility of such a place as Bluffton not being able to produce iron at figures which will yield a profit despite the dullest of dull times?

Prof. J. H. Pratt, of Birmingham, Ala., reports on samples selected from our property by Mr. Edmonds and Mr. G. S. Patterson as follows:

The sample of brown iron ore, marked "Bluff Ore," contains—	The sample marked "Gravel Ore" contains—
Metallic iron, - - - 52.37 per cent.	Metallic iron, - - - 53.23 per cent.
Phosphorus, - - - 0.782 "	Phosphorus, - - - 0.931 "
Silica, - - - 14.60 "	Silica, - - - 6.25 "
Water combined, - 8.10 "	Water combined, - 10.20 "
Moisture at 100° C - 2.50 "	Moisture at 100° C - 1.68 "

## LARGEST DEPOSIT OF IRON

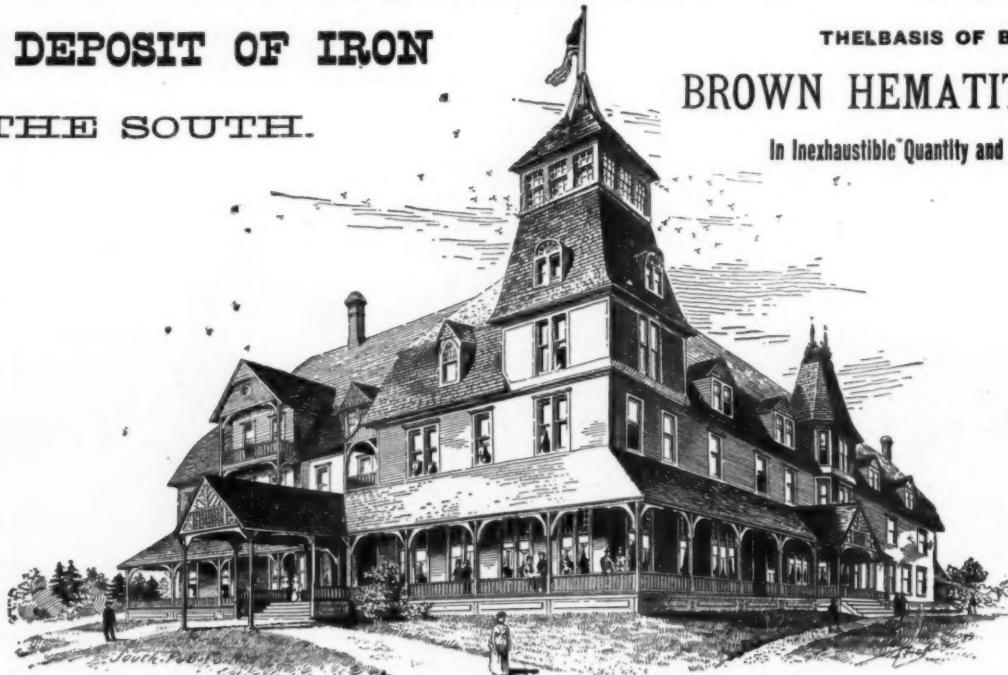
IN THE SOUTH.

THE BASIS OF BLUFFTON:

## BROWN HEMATITE IRON ORE

In Inexhaustible Quantity and Excellent Quality.

Ore can be delivered at furnaces built here at a cost not exceeding 50 cents per ton.



THE SIGNAL—NOW OPEN AT BLUFFTON.

Located on the Selma Division of the East Tennessee, Virginia & Georgia Railway, midway between Rome and Anniston, and only two miles and three-fourths from the East & West Railroad, of Alabama.

## FREE MANUFACTURING SITES.

### Rich Manganese Deposit.

There are several very large and rich outcroppings of Manganese Ore on the company's property, and the deposits have been examined by experts and pronounced exceedingly valuable. Specimens have been sent to various steel works in Pennsylvania, and the result is a large inquiry about the ore. From present development can be seen several hundred tons of this ore. There is always a ready market for manganese, and it is quoted at \$18 to 20 per ton in Pittsburgh and Chicago. More extensive work will be done on these deposits within a very short time, as the banks are easily accessible. Shipments will soon be made.

### OTHER RESOURCES.

Fire Clay and Brick Clay—Yellow Ochre.

On this property are large deposits of fire clay, which has stood the highest test. Shipments have been made to Chattanooga, Tenn., and it is pronounced a superior quality. A fire brick works could be established here that would prove extremely profitable.

In brick clay there is an inexhaustible quantity, with an abundance of water running through the clay land. Brick manufacturing here would pay handsomely, and the company would lease the clay beds for a term of years at a very low royalty.

The four charcoal pig-iron furnaces surrounding this property are nearly as valuable to this place as if they were located on the land of the Bluffton Company. The pig iron manufactured by them could be bought and utilized here for every kind of manufactured iron. They are so near that freight on the raw material would be comparatively nothing. Surrounding us, as these furnaces do, it makes Bluffton a centre.

SEND FOR PROSPECTUS. ADDRESS

# Bluffton Land, Ore & Furnace Company, Bluffton, Ala.



# FORT PAYNE, Alabama.

★ **COME TO** ★  
**The NEW ENGLAND CITY of the South.**

**Climate Unsurpassed. Abundance of Pure Water. Drainage Excellent.**

**No Better Point in the Union  
 For Safe and Profitable Investment.**

Situated on the MAIN LINE of the QUEEN & CRESCENT ROUTE, fifty-one miles Southwest of Chattanooga, and ninety-one miles North of Birmingham.

Elevation is from 895 to 1,600 ft above the sea, and above fever districts.

DeKalb County is entirely free from debt; taxes light.  
 Most liberal encouragement given to industries of every kind.

Iron Furnace and Rolling Mill will be constructed immediately, and other industries of various kinds are under contract.

Correspondence solicited from those who contemplate coming into the South to establish any kind of manufactories.

The different industries will employ at least two thousand skilled workmen, which will secure a population of over ten

thousand, independent of the many industries contemplated.

Iron of the best quality can be manufactured at as low cost per ton as in any other locality in the South.

Coal and iron are being developed rapidly of a superior quality.

Fine timber abundant and wood-working machinery of every kind can be profitably employed at this point.

The Company is prepared to give every reasonable encouragement to manufacturers who will locate at this point.

✍ Correspondence solicited.

**CAPITAL \$5,000,000.**

## OFFICERS.

President, - - -	COL. J. W. SPAULDING
First Vice-President, -	HON. D. H. GOODELL
Second Vice-President, -	HON. HENRY B. PEIRCE
Secretary, - - -	C. L. T. STEDMAN
Treasurer, - - -	F. H. TOBEY
Manager, - - -	C. O. GODFREY

## BOARD OF DIRECTORS.

HON. D. H. GOODELL, of Goodell Mfg Co., Antrim, N. H.  
 HON. HENRY B. PEIRCE, Secretary of State of Mass.  
 GEN'L SELDEN CONNOR, Ex. Gov. of Maine, Pres.  
 Northern Banking Co., Portland, Maine.  
 COL. J. W. SPAULDING, Ft. Payne, formerly of Portland, Me.  
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 COL. JOHN B. BODDIE, Birmingham, Ala.  
 W. P. RICE, Pres. Union Investment Company of Kansas  
 City, resides Fort Payne, Ala.

**FORT PAYNE COAL & IRON COMPANY, Fort Payne, Ala.**



# DENISON, TEXAS.

The "Yankee" City of the Southwest,

— AND —

✱ GATEWAY ✱

— TO THE —

## GREAT STATE OF TEXAS.

The City of Denison presents the Finest Opportunity of any City in the Southwest for the Investment of Capital in Large or Small Sums.

**D**ENISON is situated in Northeastern Texas near inexhaustible beds of coal and iron, surrounded by the finest fruit lands in the world, and adjoining the INDIAN TERRITORY, which, in the nature of things, must in a few years be opened to settlement.

The growth of Denison has been a natural one, the city having reached its present size—16,800 population—in sixteen years.

The city is regularly and beautifully laid out. Railroads run from it in four different directions. The Missouri, Kansas & Texas alone does an enormous business, having 54 miles of switch track in Denison, employing 500 skilled workmen and disbursing \$150,000 a month in wages.

The first public school in the State was established here, and the city's elegant two and three story brick school buildings, surrounded by attractive grounds, are well arranged for the use of the white and colored children. Its schools are in session ten months in each year.

We have sixteen church societies, seven of which are colored.

The city is well supplied with pure water from its numerous private wells—dug in the ground—and its first-class system of water works, giving the citizens ample protection against serious loss by fire, and enabling the insurance companies to rate the city first class as to fire hazard. Rate of taxation low.

The city has four miles of street railway, with six miles now building to be operated by steam motor; has two electric light companies and a telephone plant. It has an influential New England colony, and counts among its citizens people from every State in the Union.

A large hotel, to cost \$125,000, is to be erected here this year, and a large steel plant with \$2,000,000 of capital is contemplated.

30,000 bales of cotton were shipped from Denison in 1888. 200,000 baskets of strawberries and several carloads of peaches and other fruits have been shipped to market this season.

The Denison Canning Co., capitalized at \$100,000, has just been organized, and ground has been broken for a large fruit and vegetable canning factory.

A cotton mill company is being formed with a capital of \$500,000. Denison citizens have subscribed \$150,000 to this enterprise; Eastern capitalists will add \$350,000.

The climate of Denison is magnificent, situated nearly 800 feet above sea level. In summer it is warm, but far cooler than many cities farther North, and from 6 P. M. until after sunrise it is always cool. The city is very healthy.

The capacity of the ice factory is being increased from a daily output of 15 tons to 30.

The Denison Land & Investment Co. is prepared to give every reasonable encouragement to manufacturers, and solicit correspondence from such manufacturers as contemplate coming into the Southwest to locate.

Address all communications to

## THE DENISON LAND & INVESTMENT COMPANY, DENISON, TEXAS.

Paid-Up Capital, - - - - - \$1,200,000.

### OFFICERS:

W. P. RICE, President.

MILTON H. FRENCH, Vice-President and General Manager.

ARTHUR L. BERRY, Secretary and Treasurer.

### DIRECTORS:

W. P. RICE, Kansas City, Mo.  
J. M. FORD, Kansas City, Mo.  
A. R. COLLINS, Denison, Tex.

B. J. DERBY, Burlington, Vermont.  
PAUL LANG, Oxford, N. H.  
M. V. B. CHASE, Augusta, Maine.

MILTON H. FRENCH, Thomaston, Maine.  
A. H. COFFIN, Denison, Texas.  
JOS. B. LINCOLN, Boston, Mass.



# Morristown, Tenn.

## The Plateau City of the Great Valley of East Tennessee

is beautifully located on a plateau of Bay's Mountain, about equi-distant from the Cumberland Mountains which bound East Tennessee on the northwest, and the Alleghany Mountains which bound it on the southeast, and is 300 feet above Holston River, which washes the north base of the plateau three miles from the city. Its mean elevation above sea level is about 1,350 feet, while the hills and mountains immediately surrounding it rise to an altitude of 1,935 feet, affording views of surprising extent and grandeur, and at the same time so modifying the temperature that the thermometer rarely registers higher than 90° in summer or lower than 10° in winter. Its drainage is admirable, and malaria is unknown. It has nearly trebled its population since 1880, having now about 4,000 inhabitants. It is the commercial and business center of the richest and most extensive agricultural district in the State, where all the cereals and all the grasses

and tobacco are grown to perfection, and where fruits and berries abound. It has hundreds of thousands of acres of uncultured forests accessible to it, abounding in Poplar, Pine, Hemlock, six varieties of Oak, Chestnut, Hickory, Cedar, Maple, Birch, Beech, Sycamore, Gum, Locust, Laurel, Buckeye, Mulberry, Ash, Cherry and Walnut. The Celebrated East Tennessee Marble underlies a part of the city, and it is surrounded with rich deposits of Iron Ore, Manganese Ore, Zinc Ore and Lead Ore. It has been said by one who has made a study of the subject, that within a radius of 50 miles around Morristown every variety of iron ore in the United States can be duplicated, and a coke can be made equal to Connellsville coke. We claim without hesitation that Morristown has in its immediate vicinity richer mineral ores, and a greater variety of them, than any city on the Continent.

### MORRISTOWN

has Railroad Facilities equal to any city between Lynchburg and Chattanooga, and they will be speedily increased by the completion of the Carolina, Cumberland Gap & Chicago Railway, making the shortest possible railway route between the great cities on the Ohio River, Cincinnati and Louisville, and the seaboard cities, Charleston, Port Royal and Savannah. Besides, the Baltimore & Ohio Railway will probably extend a branch to it from Lexington, Va., and the Tennessee Midland will in all probability be built to Morristown, and a line be built giving direct connection with Atlanta.



MAP SHOWING RELATION OF MORRISTOWN TO THE COUNTRY AT LARGE.

### MORRISTOWN

has a citizenship composed almost exclusively of native born Americans. It boasts a splendid system of Graded Schools, Five Commodious Brick Churches, the finest Courthouse in Upper East Tennessee, an Opera House that will seat 600 people, two Solid Well Managed Banks, a flourishing Building and Loan Association, two of the Largest Commercial Flouring Mills in the South, Stove Works, an Agricultural Implement Factory, two Woodworking Factories, a Tobacco Factory, a Carriage and Wagon Factory, and many industries of lesser note.

It is lighted with electricity, and has water works under contract, and is now inaugurating a system of street railways. Its climatic advantages, its unsurpassed record for healthfulness, its abundance of pure water, its central and beautiful location, its transportation facilities, its fruitful agricultural surroundings, its contiguity to rich and exhaustless fields of iron, manganese, zinc and lead ores, marble, coal and timber, mark it as a place destined to be the commercial, manufacturing and railway emporium of Upper East Tennessee, Western North Carolina and Southeastern Kentucky.

To expedite this destiny the city authorities have wisely exempted from taxation for ten years all manufacturing establishments that will give employment to fifteen or more persons, and the county authorities have done the like, so that manufacturing establishments will be exempt from all taxation for ten years, except the merely nominal tax for State purposes. There has been no "boom" or inflation of prices at Morristown, and, as it possesses within itself and contiguous to it almost every element of wealth, it now presents the most inviting field for investment of any city in the South.

Persons who may desire fuller information can obtain it by calling on or addressing

## MONTVUE LAND COMPANY

POSTOFFICE BUILDING, — MORRISTOWN, TENNESSEE.



# CHARLOTTESVILLE, VA.

OFFERS

Great Advantages and Liberal Inducements to Manufacturers  
DESIRING TO LOCATE SOUTH.

Railroad Facilities, Cheap Rates and Rapid Transportation to all Points Unexcelled.

*PERFECT CLIMATE. UNLIMITED SUPPLY OF EXCELLENT WATER.*

Gas, Electricity and Street Railway. Free Schools and Churches. Different Lines of Manufacturing Enterprises Already in Successful Operation Here.

## A LIVE AND GROWING PLACE.

HOME CAPITAL WILL JOIN IN THE ESTABLISHMENT AND OPERATION OF FACTORIES.

COME AND SEE, OR WRITE TO **JOHN M. WHITE, President.**

**CHARLOTTESVILLE INDUSTRIAL & LAND IMPROVEMENT CO., Charlottesville, Va.**

# OXFORD, North Carolina.

✻ THE CAPITAL OF GRANVILLE COUNTY. ✻

SITUATED ON THREE RAILROADS, TO WHICH A FOURTH IS IN PROCESS OF CONSTRUCTION.

## The Cosmopolitan Town of the South

INVITES IMMIGRATION TO HER HOSPITABLE BORDERS.

A family living in Oxford educates boys and girls at home and never flees to the mountains or coast in summer to escape malaria, thus saving thousands to the head of the family. Mark well its points.

### POINTS.

It was founded in 1770 by Jesse Benton, father of Hon. Thomas H. Benton, yet it is the newest town in the State, having twice doubled its population in past 10 years.

### EDUCATIONAL.

It has a large military school and two excellent female colleges, one daily and three weekly papers.

### FINANCIAL.

Its taxable property is about \$2,000,000, its population 4,000. It has opera and market house, two excellent banks with ample capital.

### INDUSTRIAL.

It sells eight million pounds of tobacco a year in five mammoth brick warehouses; has four extensive tobacco factories, forty or more leaf factories, two iron foundries, three carriage factories, sash and blind factory, electric-light plant, four hotels, a broom factory, steam flouring mill, cigar factory. The noted Kimball Tobacco Company, of Rochester, N. Y., after surveying the whole tobacco field, selected Oxford as a spot to locate its North Carolina business, and are about to erect a third mammoth building.

### RELIGIOUS.

Four churches in its midst.

### CHARITABLE.

It boasts of the Oxford Orphan Asylum, two hundred and fifty children well cared for; also lodges of Odd Fellows and Masons.

### CLIMATE.

It furnishes that equable climate that delights denizens of the North. Annually hundreds come to kill quail in its adjacent fields, or seek health from its pure hilly air and mountain water. It has no chills and fever, no malaria, no epidemics.

### ITS BACK COUNTRY AND FUTURE.

Minerals in great richness and abundance fill the soil of Granville. Copper, iron, gold and silver abound. Capitalists from New York and Pennsylvania and elsewhere are working the mines to great advantage. Its farmers make that smooth, bright, waxy tobacco that only the generous soil of Granville vouchsafes to man—tobacco that improves, like old wine, with age, and is shipped with impunity through the humidity incident to an ocean voyage; and that caused Count Bunsen to exclaim that Granville county tobacco was "the finest on earth, free of nicotine." These tobaccos are the highest priced to be found anywhere, bringing often \$1.00 per pound in the leaf. Nestled in the hills of Granville, a very Arcadia, and ideal home among people busy, yet having hearts, awaiting with open arms the coming citizen. Riots are unknown, and there are no race problems to solve.

### ACCEPTIBILITY.

Oxford is only two hours from Raleigh, four hours from Richmond, Va., and five hours from Norfolk, Va.

FOR FURTHER INFORMATION ADDRESS THE SECRETARY OF THE COMMONWEALTH CLUB, OXFORD, N. C.



# SOME FACTS ABOUT FLORENCE, ALA.

Florence is in North Alabama, near the Tennessee line, on the Tennessee river, which is navigable here for large steamers. It is on the Memphis & Charleston Railroad, and the Nashville & Florence branch of the Louisville & Nashville Road.

There are many other places in the South possessing the advantages of a good climate, healthfulness, natural resources and manufacturing capabilities more happily combined and in a higher degree than can be found in any other part of the country. It is believed, however, that at no point in the South, and hence nowhere in America can there be found an aggregate of so many unsurpassed advantages and attractions as exist at Florence.

Florence can make iron as cheaply as any place in Alabama. It has facilities for the manufacture also of cotton goods equal to those of any other place. Anything that uses wood as a raw material can be made here at as low a cost as anywhere in the South.

Thousands of acres of iron ore of a high grade within a few miles of Florence are owned by Florence companies. Limestone is quarried within the town limits. There is enough of it to last for ages.

Cotton mills would get a large part of their supply from the country around Florence. Cypress creek furnishes water power and mill sites enough to make Florence the Lowell of the South.

North of Florence, and up the Tennessee river, there are large areas of timber, embracing a wide variety of hardwoods—forests that the ax has never touched.

Besides its industrial possibilities, Florence is a point of great commercial importance, and could be made the center of an enormous mercantile business. It has the advantage of both rail and river transportation and of competing railroads. Certain railroad movements are in progress now that will give it direct communication in every direction and by different lines.

Florence is surrounded by a wide extent of fertile and productive country, as well adapted for farming, stock raising, fruit growing, truck farming, dairying, &c., as any in the world. Further, it has a climate that is delightful the year round. Its health record cannot be surpassed. It has no malaria. In fact, people who live here enjoy a remarkable exemption from ailments of every sort. It has an abundance of the purest water.

For beauty of location Florence is without a peer. The Tennessee river at this point is as romantic and beautiful as the Hudson. The rolling character of the country, the slopes and hills and alternating valleys furnish a picture to charm an artist's eye. The lovely Cypress creek, a deep and rapid stream emptying into the river just below the town, presents at every turn in its tortuous course a scene of entrancing beauty. The views from some of the higher hills are as fair as the eyes of man ever rested on.

Florence is making more rapid progress, proportionately, than any other town in America. This is a strong statement but it is true. And its growth is on a solid and permanent basis.

Florence is not undergoing any wild real estate boom. Its managers are not seeking to advance real estate prices. It is not their plan to get a quick return for the money they have invested, by the rapid sale of lots at unnatural prices. It is their aim to first build up a town, to locate factories and secure a permanent population, when land will have an actual value and sell at prices from which there will not be a subsequent disastrous reaction. At present real estate is much lower in price than in any other town in the South that has made half the progress Florence has made.

Since the first of September, 1888, over 25 industries have been located at Florence, with an aggregate cash capital exceeding \$2,000,000. This remarkable growth is the result of efforts to induce people to simply investigate the attractions of Florence. Investigation and comparison with other places, on the part of any who are looking for a place in the South to locate, will in nearly every case result in the selection of Florence.

The following are some of the industries in Florence. Some of these are in operation; others are nearly ready for work and others have but recently commenced work on their buildings: A furnace about ready to go into blast, and another partly constructed; a stove factory; a hardware company, with a capital of \$300,000 to manufacture fine building hardware, &c.; a wagon factory, with capital of \$150,000; an agricultural implement works; a handle factory; a woodenware factory; a sash, door and blind factory; a cedar bucket factory; a pump factory; planing mills; a factory to make wooden butter plates such as grocers use; a flour mill; a cotton mill; a jeans factory; a gingham factory; a woolen mill; a cotton gin; a marble company; a roofing and paint company; a shoe factory; a suspender factory; a compress, packet and ferry company; three building and loan companies; a canning factory; several brick factories; a dummy railroad company, and several other enterprises.

The aggregate capital of the industrial, mercantile and development enterprises in Florence exceeds \$15,000,000.

A year ago the population of Florence was 2,000. It is now more than 8,000.

There are more than 1,100 carpenters at work in Florence and they can't build houses fast enough to keep up with the increase in population. Before the first of January next there will be 15,000 people living here.

Limited space allows here only the briefest summary of a very few of the more important facts about Florence. For more detailed information write to any of the following companies. Or better still, come down and see for yourself. Investigation is all that Florence asks or needs.

Railroad and Improvement Co.

Lauderdale Manufacturing Co.

Cotton and Iron Co.

Florence Investment Co.



# MIDDLESBOROUGH

AND

# CUMBERLAND GAP.

The Future Iron *and* Steel Center of America.

THE PASSAGEWAY FOR RAILROADS BETWEEN THE WEST AND THE EAST.

A SOURCE OF COKE SUPPLY FOR THE SOUTH AND WEST.

The Furnaces and Factories already assured will make it one of the largest manufacturing towns in the South.

## NEW INDUSTRIES

Being rapidly added to those already in operation and contracted for.

## COAL, IRON, TIMBER

AND OTHER RAW MATERIALS.

Abundant Water for all Manufacturing Purposes.

WATER FROM PURE MOUNTAIN STREAMS FOR DOMESTIC USES.

DELIGHTFUL AND HEALTHFUL CLIMATE.

Surrounded by Valleys of Rich and Productive Farm Lands.

SEND FOR CIRCULARS, PROSPECTUS, MAPS, ETC., TO

**ALEX. A. ARTHUR,**

General Manager, Knoxville, Tenn.

**JOHN M. BROOKS,**

Resident Manager, Middlesborough, Ky.



**SALE EXTRAORDINARY!****\$150,000**

WORTH OF

**CITY PROPERTY AT AUCTION**\* **AT DANVILLE, VA.** \* **READ THE LIST.** \***THE ARLINGTON HOTEL.**

This is a fine brick building, five stories high and containing fifty rooms for guests, besides office, reading room, dining room, &c. It is provided with water, gas and electric lights, fire escapes and all modern conveniences.

It is situated on Main street in the heart of the city and is by long odds the best building and best location of any other hotel in Danville. It is furnished throughout with good furniture and is now run as the leading hotel. The hotel property also has two stores fronting on Main street, and a barber shop, bar-room and store fronting on Union street, all of which are now occupied by paying tenants.

**FOUR BRICK STORES.**

Also will be sold, four brick stores on Union street. Two of these stores are near the Arlington hotel, one of which is occupied by the Southern Express Company, and two others next to the Alliance warehouse. The last mentioned stores have thirty-six rooms up stairs and in rear, and this part of the building could be used as a boarding house or hotel. Most of this property is now rented.

**LEE'S WAREHOUSE.**

This warehouse is located on Bridge street, and 110x240 feet with large lot in rear. It is two stories high in front, besides a full length basement for the storage of tobacco, with a sub-basement in rear. It is a new building of the best hard brick, and is the largest and best tobacco warehouse in Virginia or North Carolina. It is now rented to a live tenant and is one of the leading leaf tobacco establishments in the country.

**FACTORY BUILDINGS.**

FIRST.—A brick factory on High street, three stories high, 40x75 feet. It is in splendid condition and is now occupied by a good tenant.

SECOND.—A brick factory on Loyal street, four stories high, 40x100 feet. This factory has dry rooms and can be used for manufacturing purposes.

ALL OF THIS SPLENDID PROPERTY WILL BE SOLD AT AUCTION ON

**Thursday, December 12th, 1889. at 11 o'clock.**

TERMS: One-fourth cash, balance six, twelve and eighteen months. Title retained until purchase money is paid, or terms will be made with purchasers.

**SPLENDID OPPORTUNITY FOR INVESTMENT.**

DANVILLE has taken on her second growth and is rapidly building up. It is to-day the most substantial city of its size in the State, and has a brilliant prospect of doubling its population within the next ten years. It has a population of twelve thousand (exclusive of North Danville) and its real and personal property is assessed at eight million dollars. The statistics show that it is the richest city per capita in the State of Virginia.

It is a model little city, fully equipped with gas and water, telephone, electric street cars, fire department, public schools and colleges, electric lights, underground sewers, free delivery of mails and all modern conveniences.

Danville is the largest and best bright tobacco market in the world and its annual sales of leaf tobacco amount to from thirty to forty million pounds. It requires ten large warehouses to handle this tobacco.

It has about 150 large brick establishments for the handling and manufacture of tobacco, giving employment to several thousand persons. The output of manufactured tobacco this year is more than fifty per cent. greater than it was last year and the factories are constantly enlarging their business.

It has two large cotton factories, giving employment to more than a thousand hands and these are constantly increasing their capacity.

A new foundry and machine shop is soon to be removed here from Durham, N. C., and numerous other smaller industries are here and flourishing.

It has a magnificent water-power on both sides of the river already developed and inexhaustible undeveloped power up the river.

Danville is already a flourishing, pushing city and is rapidly building up its industries. It is on the main line of the Richmond & Danville road and at the junction of the Midland road. It has also the Danville & New River road running through the great tobacco county of Henry and into the fine timber lands of Patrick. So much for the present.

By February 1st the Atlantic & Danville road will be opened from Danville to Norfolk, which will give Danville a direct outlet to the seacoast. Work has now begun on the extension of this road from Danville to the coalfields of Southwest Virginia and to a connection with the great railroad system of the West. This will open up a country entirely new to Danville and will give it great advantage in the way of cheaper coal and competing railroad rates not hitherto enjoyed. The opening of this new road must make an industrial and real estate boom in Danville. Large capitalists are behind this railroad enterprise and as they have already invested largely in Danville real estate they will do all they can to push the city ahead. People who now invest in desirable real estate here must realize a handsome profit on their investment, and Danville to-day offers more flattering inducements for investments in business enterprises or real estate, or both, than any other town in Virginia.

Across the river from Danville and connected with it by a splendid iron bridge, is the flourishing town of North Danville, with a population of 4,000 and most of the North Danville people do business in Danville. In fact the two towns are virtually one, making a joint population of 16,000.

With such a splendid showing as this it is an announcement of no little moment that one hundred and fifty thousand dollars' worth of improved real estate is soon to be offered for sale in the city of Danville at public auction.

This property is sold to settle up the estate of T. J. Lee, deceased, and is the finest opportunity for a safe and paying investment ever offered in this city. Please examine the splendid list of property to be sold.

**W. H. BUNTIN.****ELIZA R. BUNTIN.**



## REORGANIZATION

# ATCHISON, TOPEKA & SANTA FE RAILROAD COMPANY.

Office of the Atchison, Topeka &amp; Santa Fe Railroad Company,

BOSTON, November 23, 1889.

At a meeting of the Board of Directors, held this day, the following preamble and resolution were unanimously adopted:

WHEREAS, The Stockholders of the Company have provided for the necessary funds to meet the requirements of the Company, subject to the terms of Circular No. 63, and

WHEREAS, The holders of a majority of all the outstanding bonds of the Atchison System, both in Europe and the United States, have assented to the Plan of Reorganization, dated October 15th, 1889, therefore be it

VOTED, that the said Plan of Reorganization be and is hereby declared effective, and that official announcement of this fact shall be made by the Chairman, accompanied by notice that Bondholders, to secure participation in the benefits of the Plan, should deposit their bonds on or before December 15th, 1889, and that after that date bonds will only be received under such equitable conditions as the Board of Directors may establish.

By order of the Board of Directors,

GEORGE C. MAGOUN, CHAIRMAN.

The BONDS of the following named issues are included, and should be deposited for exchange under the Plan of Reorganization:

ATCHISON, TOPEKA & SANTA FE RAILROAD COMPANY: First mortgage, 1899, 7 per cent. Five per cent. bonds, 1909, 5 per cent. Consolidated mortgage 1903, 7 per cent. S. F. 5 per cent. bonds, 1920, 5 per cent. Four and one-half per cent. S. F. bonds, 1920, 4½ per cent. Six per cent. S. F. secured bonds, 1911, 6 per cent. Collateral trust 5 per cent. bonds, 1937, 5 per cent. Land grant mortgage, 1900, 7 per cent.	OTTAWA & BURLINGTON R. R. CO.: First mortgage, 1909, 6 per cent.
COWLEY, SUMNER & FT. SMITH R. R. CO.: First mortgage, 1909, 7 per cent.	THE SOUTHERN KAN. R'Y CO.—GULF DIV.: First mortgage, 1926, 5 per cent.
FLORENCE, ELDORADO & WAL. VAL. R. R. CO.: First mortgage, 1907, 7 per cent.	THE SOUTHERN KANSAS R'Y CO.: Income, 1927, 6 per cent.
KANSAS CITY, EMP. & SOUTH R. R. CO.: First mortgage, 1909, 7 per cent.	THE SOUTHERN KANSAS R'Y CO., OF TEXAS: First mortgage, 1927, 5 per cent.
KANSAS CITY, TOPEKA & WEST. R. R. CO.: First mortgage, 1905, 7 per cent.	A. T. & S. F. R. R. CO., IN CHICAGO: First mortgage, 1937, 5 per cent.
KANSAS CITY, TOPEKA & WEST. R. R. CO.: Income, 1906, 7 per cent.	CHICAGO, SANTA FE & CALIFORNIA R'Y CO.: First mortgage, 1937, 5 per cent.
MARION & McPHERSON R. R. CO.: First mortgage, 1909, 7 per cent.	CALIFORNIA SOUTHERN R. R. CO.: First mortgage, 1926, 6 per cent.
THE NEW MEX. & SOUTH PAC. R. R. CO.: First mortgage, 1909, 7 per cent.	THE CHICAGO, KAN. & WEST. R. R. CO.: First mortgage, 1926, 5 per cent.
THE PUEBLO & ARKAN. VALLEY R. R. CO.: First mortgage, 1905, 7 per cent.	GULF, COLORADO & SANTA FE R'Y CO.: Second mortgage, 1923, 6 per cent.
WICHITA & SOUTHWESTERN R. R. CO.: First mortgage, 1902, 7 per cent.	GULF, COLORADO & SANTA FE R'Y CO.: First mortgage, 1909, 7 per cent.
KANSAS CITY, LAWRENCE & SOUTH. R. R. CO.: First mortgage, 1909, 6 per cent.	SONORA RAILWAY CO., LIMITED: First mortgage, 1910, 7 per cent.
SOUTHERN KANSAS & WESTERN R. R. CO.: First mortgage, 1910, 7 per cent.	LEAVEN, TOP. & SOUTHWESTERN R'Y CO.: General mortgage, 1912, 4 per cent. For the one-half guaranteed by Atchison Co.
SUMNER COUNTY R. R. CO.: First mortgage, 1910, 7 per cent.	THE WICHITA & WESTERN R. R. CO.: First mortgage, 1914, 6 per cent. (Nos. 1 to 791 incl.)
	THE KINGMAN, PRATT & WEST. R. R. CO.: First mortgage, 1916, 6 per cent. (Nos. 1 to 956 incl.)
	THE CHICAGO, KAN. & WEST. R. R. CO.: Income bonds, 1926, 6 per cent.
	CALIFORNIA SOUTHERN R. R. CO.: Income bonds 1925, 6 per cent.

## DEPOSITS MAY BE MADE AND CERTIFICATES RECEIVED THEREFOR AT

Union Trust Company, 78 Broadway, New York.

Union Trust Company, Room 9, 95 Milk St., Boston.

Kidder, Peabody &amp; Co., 113 Devonshire St., Boston.

Merchants' Loan &amp; Trust Co., Chicago.

Baring Bros. &amp; Co., 8 Bishopsgate-within, London, E. C.

Circular 63, containing full details, can be had at above addresses, and also at offices of Kidder, Peabody & Co., No. 1 Nassau Street, New York, and of Atchison Company, 95 Milk Street, Boston.

J. W. REINHART, 4th Vice-President.

GEORGE C. MAGOUN, Chairman of Board.



# Southern Railroads.

## A BIG SCHEME.

**A Tunnel to be Built Through the Heart of Baltimore,**

**And the City's Railroad Facilities Very Greatly Improved.**

After long waiting and the consideration of various plans, arrangements have at last been made to improve the railroad facilities of Baltimore. A few years ago the Pennsylvania Railroad made extensive improvements as far as its lines were concerned, and supplied itself with excellent stations, terminal facilities and other needed improvements. But the other roads centering in the city were left very poorly supplied with conveniences.

The Baltimore Belt Railroad Co. has been organized by public-spirited citizens, who saw the absolute necessity of further improvements for the future welfare of the city, and they have planned a work which it is estimated will cost between \$5,000,000 and \$6,000,000. The main object of this organization is to benefit the Baltimore & Ohio and the Maryland Central, and to this end the Maryland Central is to be made standard gauge and its tracks extended into the coal fields of Central Pennsylvania.

A tunnel is to be cut under Howard street, and, with extensions and cuts, is to form direct communication between the Camden station of the Baltimore & Ohio Railroad and the present station of the Maryland Central; then by means of further tunnels and cuts, the road is to be extended over through North and Northeast Baltimore to the tracks of the Philadelphia branch of the Baltimore & Ohio at Bayview station. The tracks of the Pennsylvania and Northern Central Railroads will be crossed by a bridge, and in every way grade crossings will be avoided as much as possible.

With the improving of the terminal facilities of these two roads will be carried out the long-talked-of belt railroad scheme. It is proposed to erect in the vicinity of Howard, Lombard, German and Liberty streets a handsome union passenger station, and it is rumored that the Richmond market site will be purchased from the city and a fine station also erected there. By building a short connection in Baltimore county near Hampden the Western Maryland can connect with the Maryland Central and also benefit by this belt road scheme, and also have access to tidewater.

The belt company was chartered with William Gilmor, president; John Henry Miller, Mr. Houseman, of Pittsburgh, and others as directors. John B. McDonald, the well-known railroad constructor, has

looked into the plans and carefully gone over the whole route with the engineers, and pronounces the scheme as perfectly feasible, as do also other well-known contractors who have had experience in tunnel building. The tunnelling will be done without creating the slightest disturbance above ground, and there will be no interruption of traffic on Howard street. Practically all the land necessary to carry out all the plans to completeness has been purchased, and as soon as the company makes permanent organization in a few days, there apparently will be nothing to interfere with beginning work very soon.

The accomplishment of these plans will greatly benefit Baltimore and the railroads concerned. It will give what the city has always needed, better railroad facilities in the heart of the city, and by carrying out the belt road scheme will add greatly to building up the suburbs of the city. Among the men interested, in addition to those already named, are George S. Brown, James Sloan, Jr., William F. Frick, Thomas M. King and John McDonald. It is understood that a controlling interest in the stock has been transferred to leading citizens of Baltimore.

The completion of this scheme will be of inestimable value to the Baltimore & Ohio Railroad in making quick connections with Philadelphia and New York, and the management of this road is furthering the scheme in every way.

THE MANUFACTURERS' RECORD learns from reliable sources that certain combinations and building of new roads are in prospect in the South which are more important than anything of the kind that has taken place in that section for a number of years, but no particulars can be given at present.

THE Atchison, Topeka and Santa Fe reorganization is an accomplished fact, a majority of each and every issue of the various bonds concerned having been deposited for exchange with the new general mortgage 4s and incomes. The reorganization has been the greatest piece of railroad financing in the history of American railway enterprises. All opposition has vanished, for, as the plan was studied, its comprehensiveness and perfect equity to all interests was manifest. The English bondholders, who at first were disposed to protest, have come in almost unanimously, and both London and Amsterdam have been very large buyers of the new bonds for investment. The road is earning beyond warmest expectations now, and a new era undoubtedly has dawned for it.

THE approaching completion of the Mobile & Birmingham Railroad has led the management of the East Tennessee, Virginia & Georgia Railway to arrange for improving their valuable wharf property at Mobile. It is said that they will at once arrange for the construction of large coal depots and chutes. The Louisville & Nashville has just completed similar plants at Pensacola with the view to exporting Southern coal to Cuba and other points in the West Indies and Central America. Mobile and Pensacola are both admirably situated for the export coal trade, and there can be no doubt that if the business is intelligently pushed it will in the near future become large and profitable.

If the building of locomotives is indicative of the general business situation, as many people claim, business must indeed be at the briskest point now, with the brightest prospects for next year, just as we have so often said of late. The MANUFACTURERS' RECORD is informed that the Baldwin Locomotive Works at Philadelphia are building twenty-seven locomotives a week now, that they are three months behind in their orders, that contracts are on hand to build one thousand locomotives next year, and that orders are constantly being refused, as the company cannot possibly fill them.

THE amazing progress of Middleborough continues. Special dispatches to the MANUFACTURERS' RECORD report the sale of 260,000 acres of coal land adjacent to the property of the American Association to English capitalists, who will center its development at Middleborough. During the week contracts for new enterprises amounting to \$1,125,000 were signed, and in three days over \$200,000 of real estate was sold in the town, with the demand steadily increasing and prices rapidly advancing. Middleborough has the greatest boom ever known in the South since that of Birmingham in 1886-87, and it is based on the establishment of more extensive enterprises than have probably ever been organized in any town in America in the same length of time.

THE Norfolk (Va.) Journal of Commerce issues an excellent trade issue of twelve pages. Anyone desiring to obtain an idea of this thriving city at the mouth of the James river can get a very comprehensive one from this paper, particularly of its business and industries.

ENLARGE WOOD-WORKING FACTORY—CHATTANOOGA, TENN., Nov. 30, 1889.—We will move our saw, door and blind factory to East Chattanooga within next two or three months and greatly enlarge same. THE WILLINGHAM LUMBER CO.

BRIDGE BUILDING WORKS—FREDERICK, MD., Nov. 27, 1889.—Potomac Bridge Works is a new enterprise to build steel and iron bridges. We are now in the market for bridge and iron structural machinery, iron and steel.

POTOMAC BRIDGE WORKS.

## Railroad Construction

Asheville, N. C.—Railroad.—The question of raising \$100,000 to secure a branch of the Charleston, Cincinnati & Chicago Railroad, is being agitated.

Athens, Tenn.—Railroad.—The East Tennessee Land Co. (office, 66 Broadway, N. Y.) is considering the construction of the proposed Athens & Emory Gap Railroad, if sufficient inducements are offered.

Atlanta, Ga.—Railroad.—The report that a syndicate of Northern capitalists, headed by E. C. Machen, of Machen, Ga., and Alex. Brown & Sons, of Baltimore, had bought the charter and right of way of the proposed Atlantic, Atlanta & Great Western Railroad, has been denied by George W. Fry, the projector of the road, who states that its construction will be commenced shortly.

Austin, Texas.—Railroad.—It is stated that the Austin & Northwestern Railroad Co. will immediately extend its lines to Llano.

Baltimore, Md.—Railroad.—The Baltimore Belt Railroad Co. contemplates constructing a tunnel under the city and erecting a station at some central point. They also intend to connect the Maryland Central Railroad with the Baltimore & Ohio. The cost of the work, including station, is to be \$3,000,000.

Baton Rouge, La.—Railroad.—The construction of a railroad to Hammond, La., to connect with the Illinois Central Railroad, is being agitated.

Bridgeport, Ala.—Railroad.—A branch of the Birmingham Mineral Railroad will, it is stated, be constructed by the Louisville & Nashville Railroad Co. (office, Louisville, Ky.) from Birmingham to Bridgeport.

Cartersville, Ga.—Street Railroad.—The Cartersville Street Railroad Co. has been incorporated.

Cartersville, Ga.—Railroad.—It is rumored that the Cartersville, Maryville & Knoxville Railroad Co., incorporated in 1887, may build their road to a junction with the Knoxville Southern Railroad.

Cedartown, Ga.—Railroad.—The East & West Railroad Co., of Alabama, (office, Cartersville, Ga.) will construct a standard gauge railroad to the ore bank of the Cherokee Iron Co. at Grady.

Chattanooga, Tenn.—Railroad.—The name of the Chattanooga Southern Railway has been changed to that of the Chattanooga Union Railway.

Chattanooga, Tenn.—Railroad.—The Chattanooga & Virginia Railway & Construction Co., previously mentioned, intend to commence their survey at once from Kingston, Tenn., up the Clinch river valley to the Virginia coal fields so as to connect with proposed route of the Atlantic & Danville Railroad Co.

Columbus, Ga.—Railroad.—The Columbus & Quincy Railroad Co., previously mentioned, has secured a charter and will, it is stated, build a continuation of the Columbus Southern Railroad to a connection with the Florida Central & Pensacola Railroad at once.

Corsicana, Texas.—Street Railway.—The street railway has been extended to make it a belt line.

Cumberland, Md.—Railroad.—It is reported that the West Virginia Central & Pittsburgh Railway Co. (office, Baltimore) contemplates the extension of its line to Hagerstown to connect with the Western Maryland Railroad.

Decatur, Ala.—Railroad.—It is rumored that work will shortly be resumed on the Decatur, Chesapeake & New Orleans Railroad.

De Land, Fla.—Railroad.—It is stated that the Jacksonville, Tampa & Key West Railroad Co. (office, Jacksonville) will build a railroad to Beresford, Fla.

Due West, S. C.—Tramway and Dummy Line.—John A. Devlin contemplates constructing a tramway or dummy railroad at once.

Gate City, Ala.—Railroad.—The work of construction has begun on the Louisville & Nashville Railroad Co.'s ten-mile branch to Graces. Another branch three miles long will be built by the same company from a point near Oxmoor, Ala., to the Eureka mines of the De Bardeleben Coal & Iron Co.

Gurley, Ala.—Railroad.—A route is being surveyed from Gurley to Cowan, Tenn., with a view to building a railroad.

Fort Worth, Texas.—Railroad.—The Fort Worth & Rio Grande Railroad Co. has let the contract for grading their road from Comanche to the Erath and Comanche county line to Martin & Byrne, of Colorado City.

Fort Worth, Texas.—Railroad.—It is stated that the Denver, Texas & Fort Worth Railroad (office, Denver, Col.) has been purchased by the Union Pacific Railroad Co. (office, Omaha, Neb.)

Glendale, Miss.—Railroad.—The Mobile & Northwestern Railroad is being changed to standard gauge.

Houston, Texas.—Railroad.—Charles Dillingham, receiver of the Houston & Texas Central



Railroad, states that work will be at once begun on the Hutchins and Lancaster branch.

Jackson, Miss.—Railroad.—It is stated that the Mobile, Jackson & Kansas City Railroad, previously mentioned, is under contract and will be commenced within 30 days.

Knoxville, Tenn.—Railroad.—The Tennessee Producers' Marble Co. will shortly build a railroad from their Bond quarry to the Tennessee river.

Knoxville, Tenn.—Electric Railroad.—The Knoxville Street Railroad Co. has let the contract previously mentioned to the Thomson-Houston Electric Co., of Boston.

Lawrenceburg, Tenn.—Railroad.—Lawrence county contemplates raising a \$200,000 subscription for the proposed line from Pulaski to a connection with the Illinois Central Railroad and the Mobile & Ohio Railroad at Jackson.

Little Rock, Ark.—Railroad.—It is stated that the Little Rock & Memphis Railroad Co. is discussing the extension of its road to Paris, Tenn.

Louisville, Ky.—Railroad.—It is rumored that the Louisville & Nashville Railroad Co. will continue its proposed Bridgeport (Ala.) branch through South Pittsburg, Tenn., to some point in Virginia.

Louisville, Ky.—Railroad Construction Company.—The Southern Railway Construction Co. has been incorporated by Wm. Ayres, James G. Givens and Harry Stucky. Capital stock \$500,000.

Louisville, Ky.—Railroad.—The Louisville, Hardinsburg & Western Railroad Co., lately mentioned, has brought suit against W. V. McCracken & Co., contractors, to make void \$780,000 of stock, and ask that they be restrained from voting the stock at the next election on account of an alleged violation of agreement.

Machen, Ga.—Railroad.—E. C. Machen, builder and owner of projected Eatonton & Machen Railroad, states that he intends to push the road to Port Royal, S. C., after he reaches Eatonton.

Marshall, Texas.—Railroad.—The construction of a 14-mile railroad to Caddo Lake is contemplated.

Memphis, Tenn.—Railroad.—The construction of a railroad to some point in Texas is being seriously agitated. Robert Gates, secretary of the Commercial Association, can give information.

Memphis, Tenn.—Railroad.—It is reported that the Louisville, New Orleans & Texas Railway Co. will double-track its road from Baton Rouge or Wilson, La., to New Orleans.

Memphis, Tenn.—Railroad.—The Memphis, Oxford & Columbus Railroad Co. and the Memphis, Tuscaloosa & Atlantic Railroad Co. have been consolidated under the name of the Memphis & Atlantic Railroad Co. to build a railroad from Memphis to Birmingham, Ala.

Memphis, Tenn.—Railroad.—E. Scott, general manager, will receive proposals until December 14 to build a 10-mile road for the Raleigh Springs Railroad, previously reported.

Monroe, La.—Railroad.—The citizens of Monroe offer the New Orleans, Natchez & Fort Scott Railroad Co. a bonus of \$1,000 a mile for each mile of road constructed in Ouachita parish and the city of Monroe, or the sum of \$50,000 in addition to the payment of the five-mile tax for ten years voted the railroad company.

Montgomery, Ala.—J. M. Brown & Co., it is reported, have the contract for building the entire line of the Montgomery, Tuscaloosa & Memphis Railroad, previously mentioned.

Nashville, Tenn.—Railroad.—The Centreville branch of the Nashville, Chattanooga & St. Louis Railroad Co. is to be made standard gauge and extended a distance of 20 miles.

Natchez, Miss.—Railroad.—The Natchez Construction Co. has received a contract from the New Orleans, Natchez & Fort Scott Railroad Co. for furnishing 5,000 tons of steel rails at \$33.50 a ton.

Principio, Md.—Railroad.—The George P. Whitaker Iron Co. contemplates building a narrow-gauge railroad from the iron mines it is opening on Iron Hill to the station of the Philadelphia, Wilmington & Baltimore Railroad.

Richmond, Va.—Electric Railway.—The Richmond Union Passenger Railway Co. will re-equip their road. They now use the Sprague motors.

Rutledge, Ala.—Railroad.—It is rumored that the Alabama Midland Railway Co. (office, Montgomery, Ala.) may build the proposed Rutledge & Julian Railroad.

Savannah, Ga.—Street Railroad.—The Savannah City Railway Co., incorporated several years ago, intends to build shortly. The capital stock is to be not less than \$300,000.

Savannah, Ga.—Electrical Railroad.—The construction of an electrical railroad is contemplated.

Savannah, Ga.—Railroad.—It is stated that the construction of the South Bound Railroad from Savannah to Barnwell, S. C., will be commenced as soon as \$25,000 additional stock is subscribed.

St. Marks, Fla.—Railroad.—The report is made that the Newport Springs Land & Improvement

Co. will construct a railroad from Newport to Monticello.

Tallulah, Ga.—Tram-road.—The Ashley Land Co. contemplates building a tram-road for logs.

Vicksburg, Miss.—Railroad.—It is reported that the New Orleans, Natchez & Fort Scott Railroad Co. will increase its capital stock from \$2,500,000 to \$3,000,000. It is also rumored that this road will be consolidated with the New Orleans & Northeastern Railroad Co.\*

Weatherford, Texas.—Railroad.—H. M. Taylor states that the Weatherford & Brazos Valley Railroad Co., previously reported, will soon build its road to the coal mines 17 miles from Weatherford.

### Another Week of Great Industrial Activity.

The magnitude and importance of the enterprises organized in the South during the past week must command the widest attention in every section of the country. Among the leading enterprises announced in this week's MANUFACTURERS' RECORD is a \$1,000,000 company to build a 150-ton Bessemer pig iron furnace at Greensboro, N. C., to be followed by a Bessemer steel rail mill, rolling mill and other important industries. This is the first Bessemer iron and steel enterprise to be established south of Maryland, and it must have a great influence upon the development of the Bessemer ore properties in North Carolina, and upon the iron and steel interests of the whole country. It will bring North Carolina into the line of iron and steel producers, and doubtless make Greensboro one of the foremost manufacturing cities of the South. At Middlesborough, Ky., there has been almost unprecedented activity, English capitalists having purchased 260,000 acres of coal land in that neighborhood, the price being reported at \$1,500,000, with a view to establishing what is said to be the largest coal, iron and steel enterprise in America, while contracts were made during the week for new enterprises and improvements to cost \$1,125,000, and in three days over \$200,000 worth of real estate changed hands. Negotiations are pending for the organization of a \$4,000,000 land and improvement company at Florence, Ala., and for the building of two new furnaces at Fort Payne, Ala., while arrangements have been made for building two near Birmingham. At Norfolk the cotton compresses and cotton warehouses have been sold to a \$2,000,000 Northern company which will build two more compresses there. A \$1,000,000 mining company has been organized in West Virginia and two \$500,000 constructing companies in Kentucky. In Virginia 84,000 acres of mineral lands is reported as sold for \$300,000 to Canadian iron ore miners. These are but illustrations which give an idea of the amazing activity that is seen throughout the South.

NEW AND LARGER FACTORY—OCALA, FLA., Nov. 29, 1889.—We will move into a new and much larger shop, and will put in a new line of new machinery, such as is necessary to successfully operate a first-class sash, door and blind factory. It is probable that later on a furniture factory will be added, but it is not an established fact. We expect to put in a larger engine and boiler, about 100 horse-power.

YONGE BROS. & CO.

## NEVER TOO LATE TO LEARN.

Some Suggestions to Men Whom Circumstances Have Forced Into the Wrong Groove.

[For the MANUFACTURERS' RECORD.]

The country is full of situation-seekers. And yet, the industrial transformation now going on in so many Southern communities, is fraught with unparalleled opportunities to capable men who know how, or who are willing to learn how, to do some one thing well. There are hundreds of inquiries for the right man, especially in scientific and mechanical pursuits, not only at the dozen or more of new manufacturing towns, such as Florence and Fort Payne, but wherever enterprises are being started and resources developed. The necessary qualifications are, first, practical knowledge; and, second, a certain degree of maturity; for boys, just out of school, no matter how well trained, cannot be expected to fill difficult positions requiring endurance, judgment and, above all, self-reliance.

There are thousands of men in the South to-day who are barely making ends meet in occupations requiring no special expertise (and consequently unremunerative) who possess every qualification for availing themselves of the opportunities referred to, except the ability to do any kind of work excellently. And the trouble is they imagine it is too late to learn. A short time ago a man of thirty asked the writer's aid in securing a situation. What could he do? "Most anything," he said. That meant nothing whatever. When asked in what direction his principal talent seemed to trend, he answered that he had a natural fondness for machine work, but it was now too late for him to cultivate it.

The case of this particular individual suggests a reply that may prove profitable to others suffering from the same delusion. Too late at thirty for the cultivation of a talent that will make situations run after the man instead of the man running after situations! No man of parts even at forty or even forty-five, provided his health be good, is too old to learn a new line of work which will accomplish such a result. Benjamin Franklin's philosophical pursuits began when he had almost reached his fiftieth year. Accorso, a great Italian lawyer, was nearly as old when he began the study of the law. Being asked why he began so late in life, he answered beginning it late he should master it the sooner. An earnest man of thirty or forty, with a talent for mechanical pursuits, will learn more in one year in a machine shop than he would have learned in three or four while yet a youth.

Disraeli in his *Curiosities of Literature* gives some remarkable instances that may encourage middle-aged men in the South to begin the acquisition of practical knowledge. He tells how Sir Henry Spellman passed his early years chiefly in farming, which greatly diverted him from his studies, but a disappointment concerning a contested estate disgusted him with rural occupations, and at fifty he resolved to attach himself to regular study. He became the most learned antiquary and one of the greatest lawyers of his day and generation. Boccaccio was thirty-five when he commenced his studies in polite literature, and yet he lived to be the foremost author of his time. Chaucer did not begin his *Canterbury Tales* till he was fifty-four years old. Ogilby, the translator of Homer and Virgil, knew little of Latin or Greek till he was past fifty. Cato at eighty thought proper to learn Greek, and Plato, almost as late in his life, Latin. The Marquis de Saint Aulaire at the age of seventy began to court the Muses and they crowned him with their freshest flowers. Socrates learned to play on musical instruments in his old age. Theophrastus began his ad-

mirable work on "Characters of Men" at the extreme age of ninety. Dryden's complete works form the largest body of poetry from the pen of a single writer in the English language, yet he gave no public testimony of poetic ability till he was far on to thirty years of age.

And now one or two modern instances of successes achieved by men who scorned to harbor the thought that it was ever too late to learn.

Thomas F. Hargis, who is to-day probably the leading lawyer at the Louisville bar, began the study of English grammar after he had been a Captain in the Confederate army; and notwithstanding the late day at which he learned what most boys learn at 10 or 12, he became Chief Justice of Kentucky at an earlier age than any of his predecessors in that high place of dignity and honor.

Mr. Harahan, late general manager of the great Louisville & Nashville Railroad system and now general manager of the Chesapeake & Ohio, was a few years ago a conductor running a "bob-tail" train on the "Shelby branch." At that time he was at an age when most men in his position would have imagined themselves too old ever to be anything but conductor, but this indomitable man did not think it too late to apply his mind to the science of railroading, which he subsequently mastered so effectually that he is to-day able to select his own position and name his own compensation. J. G. Metcalfe, the present general manager of the Louisville & Nashville, was ten years ago only a train dispatcher.

Major J. H. Field, under whose expert management, in connection with Judge Hudson and others, the city of Florence in Alabama is rapidly developing into a veritable prodigy of industrial growth, was at least forty-five before he applied himself to the study of the science of town-building, and but for the fact that he recognized town-building as a science Florence in spite of its natural advantages might have remained just what it had been for more than half a century.

Dr. J. M. Ford, the founder of Fort Payne, Ala., and the promoter of Denison's new life, was ten years ago frittering away his rare endowments keeping a drug store in Kansas City. Applying himself in middle life to the study of mineralogy, he effected exploitations which have made him not only a millionaire but a great public benefactor.

A number of encouraging examples might be selected from the list of volunteers in the late war, who after a year or two in the field became skilful commanders, though at the outset they were ignorant alike of military tactics and of the science of war. It is needless, however, to multiply examples. "What man has done man may do." The middle-aged man with a turn for mechanism, metallurgy or engineering may achieve in those lines results as satisfactory as have ever been achieved in war, law or literature. To have lived long enough to learn the lesson of life will more than compensate for the lack of early technical training.

To succeed in learning how to do one thing well may require some hardship, some self-denial, some wounding of pride, some extraordinary endeavor. It may mean spending a year as a kind of apprentice in a machine shop or factory. But no matter what it may cost, it will pay; for the manufacturing interests of the South are almost doubling up year by year, and the ratio of progression will continue to increase until the next financial panic.

If you have ability and energy and are not making money, the chances are you are in the wrong groove. Instead of seeking "a situation" on the Jack-of-all-trades-and-good-at-none principle, find out what you are fitted for doing and learn to do it admirably. If it be anything in the line of mechanism, never mind about the corns that may come on your hands, for you will in a few years have money enough to afford kid gloves to soften your hands again.

THOMAS P. GRASTY.

VERSAILLES, KY., Nov. 29.



## Southern Financial News.

### NEW BANKS.

Beeville, Texas.—The American Investment Co. contemplates establishing the national bank previously reported; capital \$50,000 or \$100,000.

Bellevue, Ky.—The Banner Loan & Savings Association has been incorporated with a capital stock not to exceed \$500,000.

Calhoun, La.—The establishing of a bank is being agitated.

Celeste, Texas.—The citizens of Celeste have subscribed \$10,000 for the organization of a new bank.

Chattanooga, Tenn.—It is stated that the banks will organize a clearing-house association.

Comanche, Texas.—The organization of another national bank is contemplated.

Cottulla, Texas.—Pfeuffer & Sloan have started a private bank.

Dawson, Ga.—The organization of a savings bank is being agitated.

De Land, Fla.—The Volusia County Bank of De Land has been organized with a capital of \$50,000.

Kosciusko, Miss.—A bank with a capital of \$200,000 has been started.

Manning, S. C.—The Dime Savings Association, of Manning, has been organized with W. E. Brown, president.

Morgan City, La.—A bank will probably be established.

Starke, Fla.—A bank with a capital not less than \$50,000 is to be organized.

Union City, Tenn.—The First National Bank has increased its capital to \$100,000.

Winchester, Ky.—A new bank is to be started.

A company has been organized by George L. Morris, J. M. Crowder and others to build an iron furnace at Birmingham, Ala., and will issue \$100,000 of bonds for the purpose.

Austin, Texas.—The comptroller has issued an additional \$4,000 of Houston consolidated bonds to the Bank of Warsaw, N. Y., and has registered \$32,500 of Cuero water works bonds and has bought \$7,000 of Burleson county courthouse bonds.

Brunswick, Ga.—The Brunswick Co. has paid off its entire bonded indebtedness amounting to \$333,000, and their property is now unencumbered.

Fort Payne, Ala.—The city council has voted to issue \$50,000 worth of bonds to complete the sewerage system, open a number of streets and build a city hall.

Griffin, Ga.—Spalding county has issued \$16,000 of bonds for public improvements.

Montgomery, Ala.—The city is endeavoring to extend the time of \$20,000 of market-house bonds due January 1, 1890; they bear 7 per cent. interest.

Montgomery, Ala.—The New York Security & Trust Co. (office, 46 Wall street, New York) invites bids for \$954,000 of Alabama State bonds, to run 30 years, bearing 4 per cent. interest.

Reidsville, N. C., will issue \$10,000 of bonds to construct a system of water works. The mayor can give particulars.

The Warm Springs Valley Co., mentioned elsewhere in this issue as incorporated at Richmond to improve and operate the Warm Springs property, will issue \$300,000 of 6 per cent. bonds.

**BIG LUMBERING OPERATIONS—CADILLAC, MICH.,** Nov. 26, 1889.—It is not our intention to commence manufacturing any of the pine which we have lately purchased in the vicinity of Gainesville, Fla., at present. In connection with the St. Tammany Land & Lumber Co. we own a very large body of pine near Covington, La., and our present intention is to commence manufacturing operations in Louisiana first. Our Louisiana tract, all told, is estimated at about one billion feet. As we shall have excellent railroad facilities to the markets of the East, North and Northwest, as well as water communication to the Eastern Atlantic ports, as well as foreign markets, we consider that our Louisiana investment is by all odds the finest one for manufacturing purposes in the South at the present time.  
J. CUMMER & SON.

**DEVELOPING FERNANDINA—FERNANDINA, FLA.,** Nov. 25, 1889.—The Fernandina Development Co. has in contemplation the cutting of one or more short canals and surveying off of certain grounds for factory sites, etc.  
FERNANDINA DEVELOPMENT CO.

**"See Us," page 44**

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by parties interested.

## Richmond Stock Exchange Quotations.

Reported by JOHN L. WILLIAMS & SON, Bankers,  
Richmond.

RICHMOND, VA., Dec. 3, 1889.

	BID.	ASKED.
North Carolina 4's, 1910.....	97	97 1/2
North Carolina 5's, 1910.....	124	126
Virginia New 3's, 1932.....	68	68 1/2
Lynchburg, Va., 5's, 1915.....	103 1/2	104
Petersburg, Va., 5's, 1918.....	103 1/2	104
Norfolk, Va., 5's, 1911.....	104	105
Richmond, Va., 5's, 1922.....	112 1/2	113
Atlanta & Charlotte Ry., 1st 7's, 1907.....	121	121
Atlanta & Charlotte G'd 6's, 1900.....	103	105
Char., Col. & Aug. R.R. Gen. 6's, 1932.....	109	109
Georgia Pacific Ry. 1st 6's, 1922.....	113	114 1/2
Georgia Pacific 2d 5's, 1923.....	80	81 1/2
Ga. Pacific Income 5's.....	30	31
Petersburg Railroad Class A 5's, 1926.....	104	106
Petersburg Railroad Class B 6's, 1926.....	106	106
Rich. & Danville R. R. Gold 6's, 1915.....	118	118
West. N. Car. R. R. Gen. 6's, 1914.....	96	99
Northwestern N. Car. R. R. 1st 6's.....	101	102
Atlanta & Charlotte R. R. Stock.....	80 1/2	90
North Carolina Railroad Stock.....	101	104
R., F. & Pot. R.R. Div'd Obligations.....	110	113
Virginia Midland Railway Stock.....	38	41
Sloss Iron & Steel Co. Stock.....	56	58
Sloss Iron & Steel Co. 1st 6's.....	94	95
Sloss Iron & Steel Co. 2d 6's.....	72	74

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Members of the New York Stock Exchange.

## Baltimore Stock Exchange Quotations.

Reported by ALEXANDER BROWN & SONS, Bank-  
ers, Baltimore.

BALTIMORE, Dec. 4, 1889.

	BID.	ASKED.
Virginia 3's, new.....	68	68 1/2
Virginia Consul Coupons, N. F.....	20	20 1/2
Virginia 10-40 Coupons.....	24	26
N. Carolina 6's.....	125	125
Norfolk Water 8's, C.....	125	127
Gt. Car. & N. 5's.....	103	103
Wil. Col. & Aug. 6's.....	115 1/2	116
Atlanta & Char. Income 6's.....	104 1/2	105
Col. & Grech. 3d, 6's.....	82	83
Va. Midland, 1st, 6's.....	120	117
Va. Midland, 2d, 6's.....	110	110
Va. Midland, 3d, 5-6.....	110	110
Va. Midland, 5th, 5's.....	92 1/2	100
Char., C. & Aug. 2d, 7's.....	116	116
West Va. Central 1st, 6's.....	109 1/2	109 1/2
Ga. Pacific 1st, 6's.....	112	112
Cape Fear & Y. Valley 6's, A.....	103 1/2	103 1/2
Cape Fear & Y. Valley 6's, B.....	101 1/2	101 1/2

## Foreign Exchange Quotations.

ALEXANDER BROWN & SONS,  
BALTIMORE, Dec. 4, 1889.

Bank of England rate 5 1/2.

	Commercial.
Sterling dull, Selling.....	47 1/2 @ 47 3/4
60 days.....	48 3/4
3 days.....	48 1/2
France.....	
60 days.....	52 1/2
3 days.....	51 1/2
Richmarks.....	
60 days.....	91 1/2
3 days.....	93 1/2
Guilders.....	
60 days.....	40 1/2
3 days.....	40 1/2

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way Companies; ALSO Lands and Water Powers.

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\*Means machinery is wanted, particulars of which will be found in "Machinery Wanted" columns.

In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

## ALABAMA.

**Anniston—Knitting Mill.**—W. F. Lang, of the Army Knitting Mills, Macon, Ga., and A. E. Karsen, of New York, N. Y., representing a syndicate, have been investigating the advantages of Anniston for the erection of a large knitting mill to employ 800 hands.

**Anniston—Electric-light Plant.**—The Anniston Gas & Light Co., lately reported as enlarging gas works, will add another 50-arc-light dynamo to its electric-light plant.

**Attalla—Basket Factory.**—A stock company will probably be organized to establish an extensive basket factory.

**Attalla—Electric-light Plant.**—The Queen City Electric-light Co., of Gadsden, will, it is stated, erect an electric-light plant.

**Birmingham—Artificial Stone Works.**—The Birmingham Artificial Stone Co. will meet December 25 to consider the issuance of bonds to pay debts and enlarge plant.

**Birmingham—Iron Furnace.**—The Vanderbilt Steel & Iron Co. has let contract for building its 100-ton iron furnace at East Birmingham, reported in last issue, to Stein & Schwarz, of Philadelphia, Pa. The company has recently purchased mineral lands near Birmingham and will, it is stated, purchase more.

**Birmingham—Iron Furnace.**—G. L. Morris, J. M. Crowder, J. C. Kyle and others will incorporate a \$300,000 stock company to build a 100-ton iron furnace. The company will purchase coal, iron and limestone properties. The furnace will probably be located in East Birmingham. \$100,000 of bonds will be issued.

**Birmingham—Iron Furnaces, &c.**—A syndicate of Eastern capitalists have purchased 3,200 acres of coal and iron lands from the Three Rivers Coal & Iron Co., and will, it is stated, incorporate a company to develop the lands and erect one or more iron furnaces at Powderly or at Hillman.

**Birmingham—Iron Furnaces.**—The Tennessee Coal, Iron & Railroad Co. has blown out its two Alice coke iron furnaces for repairs.

**Eufaula—Publishing.**—B. H. Keiser will publish the newspaper lately mentioned.

**Florence—Saw Mill.**—The Iowa Land & Lumber Co. has purchased the saw mill of G. A. Reynolds and will operate in connection with its planing mill. The company will, it is stated, increase capital stock and enlarge its plant next January.

**Florence—New Town.**—The land company reported some months ago as to be organized to develop land adjoining Florence will probably organize as the West Florence Co. It is stated that Hon. Alonso B. Cornell, of New York, will be president, and W. M. Pendleton, of Atlanta, Ga., general manager. If the pending negotiations are carried out, the company, will, when organized, own 4,000 acres of land near Florence and 100,000 acres of mineral land in Tennessee, and be capitalized at \$4,000,000.

**Florence—Wagon Factory.**—The Florence Wagon Co. will shortly purchase machinery for its wagon factory.

**Fort Payne—Iron Furnace.**—A party has made a proposition to the Fort Payne Coal & Iron Co. to organize a \$125,000 stock company to build a third iron furnace.

**Fort Payne—Sewerage System.**—The city council has decided to issue \$50,000 of bonds to complete the sewerage system and for other purposes.

**Fort Payne—Iron Furnace.**—The Bay State Furnace Co. has been organized by H. K. Keith and others to build a 100-ton iron furnace. The capital stock will be \$125,000. The Fort Payne Coal & Iron Co. can give particulars.

**Fort Payne—Sash, Door and Blind Factory and Paint Works.**—J. H. Straight, of Bellow's Falls, Vt., will, it is reported, move his sash, door and blind factory and paint works to Fort Payne.

**Fort Payne—Basket Factory.**—A basket factory is reported as to be started.

**Fort Payne—Hardware Factory.**—A Connecticut company is reported as to move its hardware factory, employing 500 hands, to Fort Payne at once. If true the Fort Payne Coal & Iron Co. can give particulars.

**Gadsden—New Boilers.**—The Gadsden (Ala.) Furnace Co. has contracted for four 100-horsepower boilers.

**Gadsden—Distillery.**—Hughes & Co. will establish a distillery.

**Gate City—Glass Works.**—The Pioneer Glass Co. will improve its glass works and resume operations, as lately stated.

**Guntersville—Iron Furnace.**—It is rumored that an iron furnace is to be built.

**Kennedy—Broom Factory.**—A broom factory has been started.

**Nottingham—Electric-light Plant.**—The Nottingham Water & Light Co. is reported as to erect an electric-light plant, and will meet December 25 to consider the issuance of \$50,000 of bonds.

**Oxanna—Carriage and Wagon Factory.**—The South Anniston Wagon & Carriage Co. will enlarge its factory.

**Sheffield—Laundry.**—Millar Bros. are erecting a new two-story building, 40x50 feet, for their steam laundry.

**Sheffield—Electric-light Plant.**—The Sheffield Electric-light Works will improve its plant.

**Sheffield—Saw Mill.**—F. M. Knowles will move his saw mill from Burnsville, Miss., to Sheffield, Ala.

**Sheffield—Straw Goods Factory.**—C. H. Buchanan contemplates enlarging his straw goods factory. (Reported last week under Georgia by mistake.)

**Shelby—Iron Furnace.**—The Shelby Iron Co. has blown in its No. 1 (charcoal) iron furnace after remodeling, as previously stated.

**Union Springs—Cotton Mill.**—The Union Springs Cotton Mill Co., lately reported as about to commence work on its cotton mill, has let contract for brick work.

## ARKANSAS.

**Argenta—Machine Shops.**—The Missouri Pacific Railway Co. (office, St. Louis, Mo.) will enlarge its machine shops.

**Arkadelphia—Dry-kilns, &c.**—The Arkadelphia Lumber Co., previously reported as erecting a patent dry-kiln, is now erecting three, and has amended its charter, increasing the capital stock from \$50,000 to \$150,000. Its mill is to be lighted by electricity.

**Arkadelphia—Saw Mill.**—The Desha Lumber & Planting Co. has put a new circular saw in its mill.

**Barrettsville—Gin.**—Stratton Bros. have erected a new cotton gin.

**Dardanelle—Electric-light Plant.**—W. E. De Long contemplates operating an electric-light plant in connection with his machine shops.

**Dardanelle Corn Mill.**—Blevins & Craven, lately mentioned as adding cotton gin to lumber mill, will also add a corn mill and probably a flour mill.\*

**Dry Run—Lumber Mill.**—The Field Lumber Co. is putting a new boiler and engine and other machinery in its mill.

**Eureka Springs—Electric-light Plant and Gas Works.**—The Interstate Gas Co., lately mentioned as receiving franchise to put in an electric-light plant, will erect a Heiser incandescent plant. It will also add a 60-horsepower boiler to the gas works.

**Forrest City—Ginnery.**—Davis & Johnson have improved their cotton ginnery.

**Hickory Plains—Gin.**—Mr. Moore has put a new boiler and engine in his cotton gin.

**Hot Springs—Laundry.**—E. A. Leake has purchased new machinery for his steam laundry.

**Little Rock—Machine Shops.**—The Missouri Pacific Railway Co. (office, St. Louis, Mo.) is reported as to commence the erection of large machine shops in Little Rock this fall.

**Little Rock—Electric Fire-alarm System.**—The city council has appropriated \$7,000 for the putting up of an electric fire-alarm system.

**Little Rock—Water Works.**—The American Water Works & Guarantee Co., lately reported as changing the location of its stand-pipe, has commenced laying additional mains.

**Pine Bluff—Boiler Shop.**—Cahall & Sweeney are erecting a boiler repair shop.

**Pine Bluff—Gin.**—E. L. Colburn is erecting a cotton gin.

**Warren—Cotton Factory.**—W. H. Wheeler is president; T. M. Goodwin, secretary, and J. R. S. Meek, treasurer, of the stock company lately mentioned as being organized to build a cotton factory. The capital stock will be \$50,000.

## FLORIDA.

**Fernandina—Canals.**—The Fernandina Development Co., mentioned in last issue as to survey sites for factories, contemplates cutting one or more short canals.

**Fernandina—Canning Factory.**—A new oyster canning factory is reported as to be started.

**Fernandina—Saw Mill.**—The Loomis Manufacturing Co., lately mentioned as enlarging its fibre factory, is reported as erecting a saw mill.

**Floral City—Broom Factory.**—R. C. Bradley will start the broom factory lately mentioned.\*

**Gainesville—Lumber Mills.**—J. Cummer & Son, of Cadillac, Mich., mentioned in last issue as selecting sites for mills to develop the timber lands recently purchased by them, state that they do not intend manufacturing any of the lumber at present.

**Kissimmee—Machine Shops.**—Efforts are being made to secure the removal of the shop of the South Florida Railroad Co. from Sanford to Kissimmee.

**McIntosh—Crate Factory.**—J. Y. Petseys, reported in last issue as having moved his crate factory to McIntosh, will add another veneer machine in the spring.

**Ocala—Sash, Door and Blind Factory.**—Yonge Bros. & Co., reported in last issue as to enlarge their novelty works, will put in machinery to operate a sash, door and blind factory, and a 100-horsepower boiler and engine. It is probable that a furniture factory will be added later.

**Punta Gorda—Cigar Factory.**—Driggers Bros. & Thomason have started a cigar factory.

**San Pablo—Shingle Mill.**—A new shingle mill has been started between San Pablo and Center Park.

**Starke—Cabinet Shop.**—W. H. Taylor will enlarge his cabinet shop and put in steam power.

**Starke—Rice Mills.**—C. L. Peek and T. Fewkes are reported as to erect two rice mills, one in Starke and the other at the new town of Sampson City.

**Starke—Saw Mill, etc.**—The Bradford County Muck Land Drainage Co., which is reclaiming land near Starke, intends laying off a town to be called Sampson City, and erecting a saw, rice, and sugar mill.

**Starke—Wood-working Factory.**—A Northern party is reported as making arrangements for the establishment of a large wood-working factory.

**Tallahassee—Publishing.**—The Florida Bureau of Immigration will publish the Monthly Bulletin.

## GEORGIA.

**Americus—Bridge.**—The Savannah, Americus & Montgomery Railroad Co. will build a bridge across Barlow street.

**Athens—Publishing.**—The Athens Publishing Co. is the name of the stock company lately reported as being organized by T. L. Gantt and Stone & Christy to consolidate their papers—the Banner and the Chronicle. The capital stock is \$50,000.

**Americus—Cotton Mill.**—The Americus Manufacturing & Improvement Co. is the name of the \$100,000 stock company reported in last issue as to be organized to secure the erection of a cotton mill and hotel.

**Atlanta—Manufacturing.**—The Southern Railway Equipment Co. has been incorporated by W. T. Spalding and A. W. Smith to manufacture and deal in railway supplies and equipment. The capital stock is \$5,000.

**Atlanta—Decorticating.**—Forbes & McCrary expect to organize a company to introduce a process for decorticating ramie.

**Athens—Cotton Mill.**—Nuttall & Dootson, of Germantown, Philadelphia, Pa., are reported as to move their hosiery mill to Athens.

**Austell—Coal Mines.**—Philadelphia capitalists are negotiating for coal lands, and will, it is stated, develop at once if they secure the lands. W. T. Dozier can give information.

**Brunswick—Saw, and Planing Mill, &c.**—J. P. Agnew, of Little Rock, Ark., has taken an option on 6,000 acres of timber lands and expects to erect a large saw mill, planing mill and variety works.

**Brunswick—Artesian Wells.**—Mr. Berryman and the Brunswick Co. are sinking artesian wells.

**Carrollton—Pulp Mill.**—A. Hutcherson and J. H. Strickland will, it is reported, erect a pulp mill.

**Cedartown—Foundry and Wagon Factory.**—M. Wright, T. D. Beazley and M. W. Reid have organized as the Cedartown Wagon Factory & Foundry to start a wagon factory and iron foundry. The capital stock is \$5,000.

**Cedartown—Iron Furnace.**—The Cherokee Iron Co. is relining its iron furnace and will shortly put it in blast. The capacity will be about 80 tons daily. The company has let contract to the Pocahontas Coke Co., of Pocahontas, Va., to furnish 100 tons of coke daily.

**Cordele—Mill.**—W. N. Leitch and F. B. Stubbs, of Dodge county, are prospecting for a mill site.

**Darien—Indicator Factory.**—The Winn Railway Station Indicator Co. has been incorporated by J. N. Winn, August Schmidt, J. A. Atwood and others to manufacture the Winn railway station indicator. The capital stock is to be \$100,000.

**Emerson—Electric-light Plant.**—Parties are prospecting with a view to erecting an electric light plant.

**Empire—Cotton Factory.**—J. C. Lavier, of Turner's Falls, Mass., representing a company, is reported as purchasing a site for a cotton factory.

**Jackson—Plow Factory.**—J. R. McCord has erected a plow factory.

**Holton—Grist Mill and Gin.**—R. E. Park, of Macon, will erect a grist mill and cotton gin next spring.

**Lexington—Water Works.**—A stock company will be organized to construct a system of water works.

**Macon—Knitting Mill.**—W. T. Lang is has enlarged his knitting mill, doubling capacity.

**Macon—Distillery.**—C. E. Smith, of Newnan, is considering the moving of his distillery to Macon.

**Marietta—Bridge.**—J. M. Stone will receive proposals until December 23 for constructing a bridge across Sweetwater creek, to be of heart pine, 75 feet long.

**Newnan—Machine Shops.**—The R. D. Cole Manufacturing Co. is enlarging its machine shops and has ordered \$10,000 of new machinery.

**Richland—Publishing.**—A. J. Tison will publish a newspaper.

**Savannah—Electric-light Plant.**—The Brush Electric-light Co., having received contract to furnish the city with 100 extra arc lights of 600 candle-power, for the year 1890, and 200 arc lights, same power, for four years from January 1, 1891, will enlarge its plant at an estimated cost of \$18,000.

**Taylorsville—Iron Mines.**—B. R. & R. Couper are developing iron mines.

**Thomas—Saw Mill.**—Thomas Norris will put a new boiler in his saw mill, reported in this issue as damaged by an explosion.\*

## KENTUCKY.

**Allensville—Flour Mill.**—John Adams and others are reported as to erect a large roller flour mill.

**Ashland—Rolling Mill and Nail Factory.**—Gas will be used as a fuel in the rolling mill and nail factory of the Norton Iron Works.

**Brandenburg—Distillery.**—The erection of a whiskey distillery is projected.

**Central City—Publishing.**—R. V. Thomas, Jr., has commenced the publication of the Herald.

**Cloverport—Gas Well.**—The Mineral Center Gas & Manufacturing Co., previously reported as to sink a second gas well, has located a well with an estimated flow of 3,000,000 feet.

**Covington—Lamp Factory.**—The Safety Signal Lantern & Manufacturing Co. has been incorporated by G. W. Benjamin, W. S. Howell, J. G. Clements and others to manufacture safety lamps. The authorized capital stock is \$100,000.

**Covington—Machine Shops.**—The Kentucky Central Railway Co. (office, Cincinnati, O.) has let contract for all the machinery for its new machine shops mentioned in last issue.

**Farmers—Electric-light Plant.**—L. A. Emery & Co. contemplate putting an electric-light plant in their lumber mill.

**Grayson—Machine Shop.**—It is reported that the Eastern Kentucky Railroad Co. (office, Greenup) will move its machine shop from Hunnewell to Grayson.

**Lexington—Clay Mining.**—The Standard Clay & Mining Co. has been incorporated by John Kaiser, G. H. Nesbitt and Theodore Weiss to mine clays and other minerals. The capital stock is \$75,000.

**Lexington—Water Works.**—The Lexington Water Works Co. expects to enlarge its water works, mentioned in last issue, next spring, and is considering plans. S. A. Charles is superintendent.

**Louisville.**—The Kentucky & Indiana Contract Co. has been incorporated by J. D. Powers, J. C. Fawcett and Stephen Powers, capital stock not to exceed \$500,000. The company is organized to



transact business in real estate, developing mines, building railroads, tramways, furnaces, &c.

**Louisville—Paint Works.**—The Collins Varnish Co. is erecting a three-story addition, 100x40 feet, and has contracted for \$4,000 of new machinery.

**Louisville—Electric-light Plant.**—The Louisville Electric Light Co. is improving its plant.

**Louisville—Furniture Factory.**—Ruth Bros. will, it is reported, enlarge their furniture factory.

**Louisville—Cotton Mill.**—The Louisville Cotton Mill Co. will, it is reported, put new machinery in its cotton mill.

**Middlesborough—Ice Factory.**—W. S. Downton, of Danville, Ky., will establish an ice factory and cold-storage plant. This is probably the ice factory referred to in last issue.

**Middlesborough—Iron Furnaces.**—The Middlesborough Steel, Iron & Coal Co., reported in last issue as letting contract for its two iron furnaces, has let contract for 300 M fire-brick for same to the Ashland Fire-Brick Co., of Ashland.

**Middlesborough—Paint Works.**—The Star Paint, Glass & Wall Paper Co., reported in last issue as incorporated, will manufacture paints.

**Middlesborough—Coal and Timber Lands.**—London (Eng.) parties have recently purchased 250,000 acres of coal and timber lands in Bell and Harlan counties, reported for \$1,500,000. A. A. Arthur can give particulars.

**New Hope—Distillery.**—The Belle of Nelson Distillery Co. is the purchaser of the distillery reported in last issue, and will increase the capacity to 5,000 barrels next season.

**Newport—Electric-light Plant.**—The Newport Light Co., recently mentioned as putting in a 50-arc dynamo, will put in two additional 50-light dynamos and 10 miles of wire in the near future.

**Newport—Tool Factory.**—The American Axe & Tool Co. has been incorporated by W. H. Forbes, John S. May and others with an authorized capital stock of \$4,000,000, for the purpose of manufacturing all kinds of edged tools.

**Owensboro—Distillery.**—The John Hanning Distillery Co. will repair its distillery reported in this issue as damaged by a boiler explosion.

**Paris—Electric-light Plant.**—The organization of an electric-light company under a charter granted some time ago is contemplated. It is also stated that the gas company will have its charter amended to allow it to put in an electric-light plant.

**Pineville—Electric Light.**—The lighting of Pineville with the Edison electric light is contemplated.

**Russellville—Grist Mill.**—The grist mill reported in last issue will be operated by A. G. Gooch & Sons.

#### LOUISIANA.

**Altoona—Machine Shops and Gins.**—John P. Richardson, of Chattanooga, Tenn., and W. P. Richardson, of Altoona, will make Altoona their central point of operations for all their cotton plantations. They will, it is said, build a town there and establish several large gins, machine shops, etc. About 400 men are reported as at work clearing land and building houses.

**Covington—Lumber Mill.**—J. Cummer & Son, of Cadillac, Mich., and the St. Tammany Land & Lumber Co. will shortly begin the manufacture of lumber from their lands near Covington.

**Gretna—Shingle Mill.**—Joseph Rathborne & Co., of Chicago, Ill., will organize a company to erect the shingle mill lately mentioned. Machinery has been purchased.

**Harrisonburg—Publishing.**—Warren G. Mobley will publish a newspaper.

**Morgan City—Ice Factory.**—The erection of an ice factory is projected.

**New Orleans—Box Factory and Planing Mill.**—The Brakenridge Lumber Co. contemplates erecting a box factory and planing mill.

**New Orleans—Vinegar Factory.**—Rogers & Kern have applied for permission to operate a vinegar factory.

**New Orleans—Drainage and Paving.**—A commission will probably be appointed to prepare plans for the drainage and paving of the city. The mayor can give information.

**Tallulah—Saw Mill.**—The Ashley Land Co. has purchased the saw mill of J. L. Wilson.

#### MARYLAND.

**Baltimore—Lard and Sausage Factory.**—The South Baltimore Packing Co., lately reported as putting a new engine and boiler in its packing-house, will increase the capacity of its lard and sausage factory.

**Baltimore.**—A company of which E. G. Kenly is general manager and Major Eugene Carrington, superintendent, has commenced developing a new system of heating for general use.

**Baltimore—Sugar Refinery.**—The Baltimore Sugar Refinery Co., which, as previously reported, is erecting a large sugar refinery, will shortly let contract for machinery.

**Baltimore—Electric-light and Gas Fixtures.**—Contract for manufacturing and placing in position in the Baltimore postoffice building the combination electric-light and gas fixtures lately re-

ported has been let to the Schultz Gas Fixture & Art Metal Co. at \$5,138.65.

**Baltimore.**—The mechanical department of the city water works has been moved to another location and a 15 horse-power boiler put in.

**Baltimore—Surgical Instrument Factory.**—John D. McGonigle has started a surgical instrument factory. Machinery has been purchased.

**Baltimore—Horse-shoe Factory.**—A Northern syndicate is negotiating with the Southern Land & Silk Association for a site at the new town of Pasadena for a horse and mule-shoe factory. It is intended to manufacture by machinery.

**Baltimore—Foundry and Machine Shop.**—The Campbell & Zell Manufacturing Co., lately reported as purchasing the Baltimore Car Wheel Co.'s old foundry and machine shop, has ordered new machinery. The foundry is 160x280 feet, and the machine shop, three stories, 60x60 feet. The company has a capital stock of \$100,000. J. Vernon Campbell is president.

**Catoctin Furnace P. O.—Iron Furnaces.**—The Catoctin Iron Co. has blown in its iron furnaces.

**Cumberland—Woolen Mill and Knitting Factory.**—Bemis & Dustin, of Chicago, Ill., offer to erect a woolen and worsted mill and knitting factory if the citizens donate a site and subscribe for \$125,000 of stock.

**Frederick—Carpet Factory.**—C. E. Cline & Co. will start a rag and jute carpet factory.

**Frederick—Bridge Works.**—The iron and steel bridge works, lately mentioned as to be erected by H. G. Welty will be known as the Potomac Bridge Works.\*

**Havre de Grace—Shoe Factory.**—J. Faust & Sons, of Baltimore, previously reported as to move their shoe factory to Havre de Grace, have commenced the erection of factory buildings as follows: A two story building 40x200 feet, another 40x156 feet for storage, a one-story building 54x308 feet, and a boiler and engine-house 32x56 feet to contain two sixty horse-power boilers, and have a brick smokestack 65 feet high. The estimated cost is \$125,000.

**Perryville—Fertilizer Works.**—The Eureka Fertilizer Co. is improving its plant.\*

**Principio—Iron Mines.**—The George P. Whitaker Iron Co., lately mentioned as letting contract for a new furnace, is opening iron mines on Iron Hill.

**Rock Springs—Kaolin Mines.**—Isaac Davis, of Trenton, N. J., has leased the kaolin property of S. J. Love, mentioned in last issue, and is opening mines.

**St. Michaels—Flour Mill.**—A. K. Easter is the proprietor of the flour mill lately reported as being remodeled to the roller system.

**Washington, D. C.—Shoe Factory.**—The Kearney Shoe Manufacturing Co. will organize a \$50,000 stock company to manufacture shoes under its patent method.

#### MISSISSIPPI.

**Brookhaven—Saw and Planing Mill.**—The Norwood & Butterfield Co. has erected a planing mill, and is putting a new engine in its saw mill.

**Greenville—Cotton Mill and Gin.**—Forbes & McCrary, of Atlanta, Ga., are organizing a \$500,000 stock company to erect a large cotton mill and cotton gin at Greenville. \$250,000 of the stock has been subscribed.

**Meridian—Soap Factory.**—The Meridian Canning Co. will amend its charter authorizing the operating of a soap factory.

**Meridian—Basket Factory.**—Parties who contemplate the erection of a large basket factory to employ 100 hands have asked for inducements to build the factory in Meridian.

**Port Gibson—Cotton Linn.**—V. & A. Meyer & Co., of New Orleans, La., have secured the property of the Port Gibson Cotton Mills Co., and will organize a new company to have a capital stock of \$100,000 to operate the cotton mill. A large amount of new machinery will be put in.\*

**Port Gibson—Oil Mill.**—The Port Gibson Oil Works has erected an iron storage tank of 4,000 barrels capacity.

**Vicksburg—Bridge.**—The New Orleans, Natchez & Fort Scott Railroad Co. will build a bridge across the Tensas river to have a 60-foot draw.

#### NORTH CAROLINA.

**Charlotte—Soap Factory.**—Negotiations are pending for the establishment of the soap factory lately mentioned. J. L. Brown is interested.

**Durham—Barrel Factory.**—N. A. Ramsey has, it is reported, organized a company to manufacture barrels.

**Greensboro—Iron Furnace and Steel Mill.**—The North Carolina Steel & Iron Co., capital stock \$1,000,000, has been organized to build a 150-ton Bessemer furnace, to be followed by steel rail mill, rolling mill, &c. The directors are: George S. Scott, New York; Col. A. B. Andrews, Raleigh, N. C.; James A. Odell, of Greensboro, N. C.; Theo. F. Klutz, Saml. H. Wiley and J. J. Newman, of Salisbury. Officers: James A. Odell, president; J. J. Newman, vice-president and general manager; Saml. H. Wiley, secretary and treasurer. J. J. Newman, general manager, Salisbury, N. C., can give particulars.

**High Point—Flour and Grist Mill.**—Hammer & Teague, reported in last issue, are erecting a flour and grist mill at their saw mill.\*

**Marion—Gold Mine.**—Gold has been discovered on the property of William McClung.

**Morganton—Pottery.**—The North Carolina Pottery Co. has been incorporated by A. F. Lightbill, J. F. Boyd and J. P. Eldridge to manufacture pottery, deal in real estate and to conduct a mining and timber business. The authorized capital stock is \$100,000.

**New Berne—Wooden Plate Factory.**—The S. H. Gray Manufacturing Co. will rebuild at once

its wooden plate factory mentioned elsewhere in this issue as destroyed by a storm.

**New Berne—Electric-light Plant.**—The New Berne Gas Co. has organized a new company with A. H. Leftwich as president and U. S. Mace, secretary and treasurer, to erect the electric-light plant lately mentioned at its gas works.

**Plymouth—Brick-yard.**—A brick-yard will probably be started.

**Plymouth—Shingle Mill.**—L. McCarty has erected another shingle mill.

**Reidsville—Water Works.**—A system of water works is to be constructed and \$10,000 of bonds will be issued for that purpose. Mr. Burlingame, of Providence, R. I., is preparing estimates.

#### SOUTH CAROLINA.

**Charleston—Ice Factory.**—The Zero Ice & Cold Storage Co. has been incorporated with a capital stock of \$40,000.

**Darlington—Carriage and Harness Factory.**—C. W. Hewitt is erecting a new carriage and harness factory 120x37 feet.

**Spartanburg—Cotton Mill.**—The Whitney Manufacturing Co. will put additional machinery in its mill.

#### TENNESSEE.

**Bristol—Ice Factory.**—The Bristol Ice Factory is reported as to be enlarged.

**Bristol—Iron Furnace.**—Benjamin Dulaney and others are raising a \$10,000 bonus to secure the erection of an iron furnace.

**Cheatham County—Saw Mill.**—George S. Johnson will add new machinery to his saw mill.

**Chattanooga—Foundry and Machine Shops.**—G. H. Lowell, of Manchester, N. H., is reported as to move his foundry and machine shops to East Chattanooga.

**Chattanooga—Sash, Door and Blind Factory.**—The Willingham Lumber Co. will move its sash, door and blind factory, mentioned in last issue, to East Chattanooga within the next two or three months and greatly enlarge same.

**Chattanooga—Saw Mill.**—The Hughes Lumber Co., previously reported as rebuilding its planing mill, has also erected a band saw mill.

**Chattanooga—Planing Mill.**—The Woodward Lumber & Manufacturing Co. will put a new engine and boiler in its planing mill.

**Chattanooga—Lumber Mill.**—The Empire Lumber Co. will put in a Tunis gang planer.

**Columbia—Plow Factory.**—E. E. Erwin, T. Rains and others are organizing a \$30,000 stock company to manufacture the Craig & Wilkins patent plow.

**Cookeville—Spoke and Handle Factory.**—S. A. Epperson, manager of the Nashville Spoke & Handle Co., of Nashville, contemplates erecting a spoke and handle factory.

**Covington—Flour Mill.**—Wood & Co. contemplate enlarging their flour mill to 200 barrels daily capacity.

**Fayetteville—Planing Mill.**—J. L. Waggoner contemplates putting new machinery in his planing mill.

**Fayetteville—Water Works.**—The Fayetteville Water Works Co. has been incorporated by W. C. Morgan, H. K. Bryson, J. F. Healy and others to construct the water works lately mentioned.

**Johnson City—Publishing.**—George E. Boren will publish the Advance.

**Kenton—Saw Mill.**—Henry Flowers, lately reported as contemplating putting new machinery in his saw mill, will add shingle, filloe, base-ball-bat and axe-handle machinery.

**Knoxville—Iron Works.**—The Knoxville Iron Co. has recently put in two new puddling furnaces.

**Memphis—Iron Works.**—The Chickasaw Iron Works contemplates putting in some new machinery.

**Memphis—Box Factory.**—C. L. Merrill, vice-president of a box manufacturing company, of Indianapolis, Ind., will, it is reported, erect a box and butter-dish factory to have a daily capacity of 10 M boxes and 1,000,000 butter dishes and to cost \$100,000.

**Memphis—Lumber Mill.**—The Cochrane Lumber Co., lately reported as purchasing the lumber mill of R. L. Cochrane & Co., is putting a new carriage in the mill.

**Memphis—Publishing.**—The Democrat Publishing Co. has been incorporated by J. E. Goodlett, W. J. Crawford, W. F. Taylor and others.

**Memphis.**—The Stratton Co. has been incorporated by M. B. Nash, R. L. Stratton, F. R. Harris and others.

**Morristown—Steel Works and Machine Shops.**—The Southern Coal, Iron & Railroad Co. which claims to intend to build the Blue Ridge Railway system from Asheville, N. C., to Athens, Tenn., is reported as also claiming to build steel works and machine shops in Morristown. L. C. Woolkins, is given as chief engineer, 630 Atlantic avenue, Boston, Mass.

**Murfreesboro—Cedar Works.**—The Murfreesboro Red Cedar Works will put in a band saw and resaw. It also contemplates operating an ice factory in connection with its works.

**Nashville—Flour Mills.**—An English syndicate has, it is reported, secured an option on the

Nashville Flour Mills and is endeavoring to option other mills.

**Nashville—Machine Shops.**—The Adams & Price Locomotive & Machine Works is putting in new machinery.

**Nashville—Laundry.**—The Board of Public Works will put a steam laundry in the new hospital. Contract for machinery has probably been let.

**Rockwood—Iron Mine.**—T. J. Brown is reported as opening an iron mine.

**Ridgedale—Reservoir.**—The Chattanooga Water Co. will rebuild its reservoir at once, mentioned in this issue as destroyed by the giving away of the foundation.

**Rosedale—Box Factory.**—C. L. Merrill, reported in this issue (under Memphis) as to erect a box and butter-dish factory, will, it is stated, establish another at Rosedale.

**Sherman Heights—Dish Factory.**—A company of which G. T. Benjamin is president and J. E. Doubleday secretary and manager will erect a factory for the manufacture of wooden butter dishes.

**South Pittsburgh—Pipe Works.**—The Tennessee Coal, Iron & Railroad Co. will, it is stated, establish iron pipe works and organize a company to operate them.

**Spring City—Saw Mill.**—Geo. Baldwin, successor to Gillespie & Baldwin, has put new machinery in his saw mill.

**Tazewell—Flour Mill.**—It is reported that a stock company will be organized to erect a roller flour mill.

**Tyner—Clay Mines.**—Terra-cotta and tile clay has been discovered on the farm of Jordan Ellis and will probably be developed.

#### TEXAS.

**Austin—Bridge.**—J. M. Brackenridge will receive proposals until December 16 for the repair and completion of the bridge across the Colorado river at Montopolis Ford, near Austin.

**Ballinger—Water Works.**—Efforts are being made to organize a stock company to build water works. The mayor can give information.

**Beaumont—Flour Mill.**—A flour mill is projected. The secretary of the Board of Trade can give information.

**Bonham—Water Works.**—Contract for constructing the water works previously reported has been let to Mr. Chatham, of Illinois. A reservoir is to be built, and the water from the artesian well previously mentioned as being sunk utilized. Estimated cost, exclusive of mains, is \$18,500. The mayor can give further particulars.

**Dallas—Electric Light Plant.**—The Queen City Electric Light Co. will put in a new 500 horse-power Corliss engine and make other improvements in its plant, expending about \$100,000. The Fort Wayne Jenney Electric Light Co., of Fort Wayne, Ind., will furnish the machinery.

**Dallas—New Industries.**—The Dallas Manufacturers' Aid & Improvement Co. has been incorporated by Jules Schneider, O. P. Bowser, E. G. Knight and others to secure the establishment of new industries. The capital stock is \$500,000. It is stated the company has in view the removal to Dallas of a rolling mill in Minneapolis, Minn., buggy and carriage factory in Kalamazoo, Mich., agricultural implement factory in Wichita and a wagon factory in Iowa.

**Denison—Electric-light Plant.**—J. B. McDougall, previously reported as erecting an electric-light plant, has, with John Scullin, G. A. Madill, W. B. Munson and others, incorporated the Denison Light & Power Co. with a capital stock of \$125,000.

**Eagle Pass—Electric-light Plant.**—The Texas Mexican Electric Light & Power Co. is the name of the company lately reported as organized and as letting contract for machinery. It expects to commence operations January 1, 1890. The authorized capital stock is \$40,000.

**Fort Worth—Cotton Mill.**—A. W. Caswell is making efforts to secure the erection of a cotton mill on the Walker tract.

**Fort Worth—Sewing Machine Factory.**—The secretary of the Board of Trade has received a proposition to establish a sewing machine factory in Fort Worth.

**Fort Worth—Artesian Well.**—H. L. Lathrop is sinking an artesian well.

**Galveston—Cotton Pickery.**—George Dobson & Co. have put a water motor in their cotton pickery.

**Granbury—Electric-light Plant.**—Egloff Bros. will put an incandescent electric-light plant in their flour mill lately mentioned.

**Hempstead—Bridges.**—D. A. Woods has contract to construct three wooden bridges at \$3 per foot.

**Henrietta—Electric-light Plant and Water Works.**—It is reported that Eastern capitalists have secured control of the Henrietta Improvement Co. and will reorganize it and erect an electric-light plant and construct water works.

**Hillsboro—Flour Mill.**—J. R. Thompson is interested in the \$20,000 stock company lately reported as being organized to erect a roller flour mill.



Houston—Electric-light Plant.—The Houston Electric Light Works will put in an additional arc dynamo and an incandescent dynamo. Joseph P. Smith is general manager. The Fort Wayne Jenney Electric Light Co., of Fort Wayne, Ind., will furnish the machinery.

Houston—Brewery.—Adolphus Busch, of the Anheuser-Busch Brewing Co., of St. Louis, Mo., offers to subscribe for \$200,000 of a \$300,000 stock company to build a large beer brewery if the remainder is raised in Houston.

Houston—Machine Shops.—The report that the Houston & Texas Central Railroad Co. (office, Houston), referred to lately, would build machine shops, is untrue.

Laredo—Tannery.—The establishment of a tannery is projected. The secretary of the Board of Trade can give information.

Laredo—Grist Mill and Gin.—The Laredo Cotton Gin & Milling Co. is purchasing machinery for its grist mill and cotton gin lately reported.

Laredo—Foundry and Machine Shops.—The Laredo Foundry & Machine Co. has commenced work on its foundry and machine shops mentioned in last issue.

Laredo—Cotton Mill.—Negotiations are pending with a Georgia party for the establishment of a \$100,000 cotton mill. The secretary of the Board of Trade can give particulars.

Laredo—Woolen Mill.—A Northern party has made a proposition to move his woolen mill to Laredo, and a stock company is being organized. The secretary of the Board of Trade can give particulars.

Laredo—Brick-yard.—A St. Louis brick company will, it is reported, establish a large brick-yard.

Laredo—Water Works.—The Laredo Water Works Co. is laying larger mains.

Orange—Lumber Mill.—D. R. Wingate & Co. have put a new engine in their lumber mill.

Orange—Lumber Mill.—A. Gilmer has put a new boiler in his lumber mill.

Orange—Electric-light Plant.—Efforts will probably be made to erect an electric-light plant.

Orange—Lumber Mill.—Lutcher & Moore will put a Tunis gang planer in their lumber mill.

Pilot Point—Canning Factory and Evaporator.—The Pilot Point Canning Co., mentioned in last issue, has let contract for canning machinery of 10,000 cans daily capacity, and also for evaporator of 50 bushels daily capacity.

Prairie Plains—Saw Mill.—Keisler & Bro. will put a new engine in their saw mill.\*

San Angelo—Canning Factory.—A canning factory is projected.

San Angelo—Woolen Mill.—The erection of a woolen mill is contemplated.

San Antonio—Natural Gas, etc.—A. Fitzgerald & Co. have petitioned the city council for a franchise to develop natural gas, oil, silver and other minerals which they claim to have discovered under the bed of the San Antonio river within the city limits.

Santa Anne—Flour Mill.—It is reported that a roller flour mill will be erected.

Trinity—Saw Mill.—Anderson & Cameron will put a Rife flooring mill in their saw mill.

#### VIRGINIA.

Alexandria—Sewerage System.—The city council will probably appoint a committee to investigate the cost, etc., of constructing a sewerage system. The mayor can give information.

Amherst C. H.—Tannery.—A Baltimore party is negotiating for a site for a tannery.

Buena Vista—Iron Mines, etc.—The Loch Laird Estate & Mineral Co., of London, England, has purchased the Laird farm containing about 450 acres of mineral and farming land. Manganese and iron ore veins are now being opened on the property, and the company intends, it is stated, starting several industries. Thomas Dunlap is manager of the company.

Buena Vista—Flour Mill, etc.—John Sheridan, A. L. Nelson, B. C. Moomaw and others have purchased the E. A. Moore farm, containing 300 acres and including a flour mill, for \$20,000. A land and improvement company will probably be organized.

Covington—Mineral Lands.—Peter McLaren, of Ontario, Canada, has purchased the Southall survey, containing 84,000 acres of mineral lands, from James Bumgardner, Jr., of Staunton, for \$300,000.

Franklin—Peanut-cleaning Factory.—The Farmers' Alliance Peanut Cleaning & Storage Co., reported in last issue as incorporated, proposes to erect a peanut-cleaning factory at once.

Franklin—Electric-light Plant.—The Camp Manufacturing Co. is completing arrangements for putting an electric-light plant in its lumber mill.

Fredericksburg—Bridge.—A bill will be introduced in the legislature to authorize the town of Fredericksburg to issue \$20,000 of bonds for the purpose of building an iron bridge across the Rappahannock river.

Marion—Plaster Lands.—Green B. Raum, of

Washington, D. C., has purchased the Brown & Watson plaster properties for \$30,000.

Milnes—Iron Furnace.—The Shenandoah Iron Co. has let contract to the American Bridge Co., of Roanoke, to build an addition to its iron furnace.

Newcastle.—The Craig City Improvement Co. has been incorporated by D. F. Connell, of Portsmouth, Ohio; J. C. McDonald, of Hinton, W. Va.; W. W. Ballard, of Salem, and others.

Newcastle—Mining.—The Manganese, Iron & Coal Co. has been chartered by D. F. Connell, of Portsmouth, Ohio; J. C. McDonald, of Hinton, W. Va.; C. W. Howard, of Chattanooga, Tenn., and others.

Norfolk—Compresses.—A syndicate of which V. D. Grover is president, Fergus Reid, general manager, and C. C. Pearson, treasurer, has purchased the National Shippers' and Atlantic cotton compresses and will, it is stated, build two more at once. The capital stock is \$2,000,000.

Norfolk—Shoe Factories.—A party of Lynn (Mass.) shoe manufacturers has been investigating the advantages of Norfolk with a view to the rebuilding at that place of their recently burned shoe factories.

Petersburg—Steamboat Line.—The Petersburg & Norfolk Steamboat Line has been incorporated with J. F. Mancha as president; R. Mancha, vice-president, and C. R. Bishop, secretary, to operate a steamboat line. The capital stock is to be not less than \$50,000 nor more than \$100,000.

Portsmouth—Water Works.—The Portsmouth & Suffolk Water Co. has erected another steam pump at its water works and will, it is stated, complete arrangements by next February to operate the engine by water-power.

Pulaski City.—The Bertha Zinc Co., mentioned in last issue as making extensive improvements at its zinc mines, has purchased the farm of C. H. Calfee, containing 340 acres, for \$12,500.

Pulaski City—Water Works, etc.—An application will be made to the legislature to amend the charter of the town authorizing the issuance of bonds for constructing water works and other improvements.

Richmond—Woodenware Factory.—The Bon Air Manufacturing Co. has been incorporated with M. M. Gilliam, president, and W. H. Palmer, secretary and treasurer, to manufacture woodenware. The capital stock authorized is \$100,000.

Richmond—Granite Quarries.—The Southern Granite Co. has been incorporated with Warner Moore, president, and P. A. Wellford, secretary and treasurer, to develop granite quarries. It has purchased a granite quarry near Manchester from Mr. McDonald and others. The capital stock is to be not less than \$75,000 nor more than \$750,000.

Roanoke—Machine Works.—The Roanoke Engine & Machine Co., reported in last issue as organized, has been incorporated with L. H. Simmons, president; William Lunsford vice-president, and L. T. Powell, secretary. The capital stock is to be not less than \$100,000 nor more than \$1,000,000. The company expects to have works in operation in six months.

Roanoke—Brewery.—The Virginia Brewing Co. is the name of the company lately reported as being organized to build a beer brewery. H. Creuger is president; C. F. Mandler, secretary, and W. F. Penn, treasurer. The capital stock is to be not less than \$25,000 and not more than \$100,000.

South Boston—Tobacco Factory.—The South Boston Smoking Tobacco Co. has been organized by T. T. Lawson and G. V. Nichols to manufacture smoking tobacco.

Warm Springs.—M. E. Ingalls and W. P. Anderson, of Cincinnati, Ohio, reported in last issue as purchasing the Warm Springs property, have, with O. D. James, H. T. Wickman and others, incorporated at Richmond the Warm Springs Valley Co. to improve and operate same. The capital stock is to be \$300,000, and \$300,000 of bonds will be issued. The principal office is to be in Richmond.

#### WEST VIRGINIA.

Belmont—Oil Well.—James Starz has sunk an oil well on the Abe Smith place.

Charleston—Saw Mill.—H. D. Ruffner has rebuilt his saw mill, previously reported as wrecked by a boiler explosion.

Coal Valley—Coal Mines.—The development of the St. Clair coal mines has been resumed, with M. T. Davis as superintendent.

Keyser—Shoe Factory.—I. S. Emerson, of Brockton, Mass., has been investigating with a view to erecting a shoe factory.

Long Reach—Oil Well.—D. D. Johnson will probably sink an oil well.

New Cumberland—Oil Well.—R. H. Herron has, it is reported, struck a 75-barrel oil well.

Piedmont—Electric-light Plant.—The Baltimore & Ohio Railroad Co. (office, Baltimore, Md.) will probably put an electric-light plant in its machine shops at Piedmont.

Richie C. H.—Spring Factory.—A bed spring factory has been started.

Sutton—Saw Mills.—George W. Curtin & Co. have purchased three saw mills to be erected on their timber lands at the mouth of Grand creek.

Wheeling—Electric-light Plant.—The city will petition the legislature for authority to own and operate an electric-light plant. The mayor can give information.

Wheeling—Oil and Gas Wells.—The Fleming Oil & Gas Co. has been incorporated by F. A. Fleming, of Fairmont; G. O. Smith, N. B. Scott and J. F. Sweeney, of Wheeling, to drill for oil and gas and piping the same. The authorized capital stock is \$100,000.

Wheeling—Coal Mines, etc.—The New Orleans Coal Co. has been incorporated to mine coal and other minerals with a capital stock of \$10,000.

Wheeling—Coal and Iron Mining.—The Panhandle Coal & Iron Co. has been incorporated by Alfred Pauli, C. B. Hart, Anton Reyman and others for the purpose of mining coal, iron ore, limestone, etc. The authorized capital stock is \$1,000,000.

Williamsburg—Saw Mill.—W. H. Wyatt has added a saw mill to his grist mill.

Woodlands—Flour and Grist Mill.—A. Suter & Bros. are rebuilding their flour and grist mill lately reported as burned.\*

#### BURNED.

Baltimore, Md.—The paraffine works of Reed Bros., at Highlandtown; loss about \$12,000.

Evergreen, La.—The sugar-house of S. S. Pearce.

Glendale, Miss.—The saw mill of Henry Haynes damaged by a boiler explosion.

Jacksonville, Fla.—The Burnside House and Palmetto Hotel on the Atlantic coast, about 20 miles from Jacksonville; loss about \$12,000.

Magnolia, Miss.—The saw and planing mill of C. C. Gibson & Son.

Mannington, W. Va.—The Mannington Woolen Mill; loss about \$18,000.

Moorestown, N. C.—The tobacco factory of J. F. Bland.

McRae, Ga.—The turpentine distillery of H. S. McCallum, near McRae.

New Berne, N. C.—The dry-kilns of the Trent Lumber Co. reported as damaged by fire.

New Berne, N. C.—The wooden plate factory of the S. H. Gray Manufacturing Co. destroyed by a storm.

New Iberia, La.—The sugar refinery of Martin & Childs damaged by a boiler explosion.

North Middleton, Ky.—The college built by Prof. J. T. Patterson; loss \$30,000. It will be rebuilt.

Oglethorpe County, La.—The saw mill and cotton gin of T. R. Tiller.

Owensboro, Ky.—John Hanning distillery damaged by a boiler explosion; loss about \$5,000. Will be repaired.

Pacolet, S. C.—The grist mill, cotton gin and planing mill of the Pacolet Manufacturing Co.; loss \$8,000.

Parkersburg, W. Va.—The mill of the Parkersburg Mill Co. damaged by an explosion of three fly-wheels; loss between \$7,000 and \$10,000.

Pensacola, Fla.—The planing mill of J. A. Callaghan; loss \$10,000.

Petersburg, Va.—The pyrotechnic factory of Manine & Romaine, recently.

Pineville, La.—The saw mill of Brasher Bros.; loss \$6,000.

Pleasant Plains, Ark.—The saw mill of McDougal & Scroggins damaged recently by a boiler explosion.

Prescott, Ark.—The planing mill of T. W. Neal lately destroyed by a boiler explosion.

Ridgedale, Tenn.—The reservoir of the Chattanooga Water Co., of Chattanooga, destroyed by the giving away of the foundations. Will be rebuilt at once.

Thomson, Ga.—The saw mill of Thomas Norris damaged by a boiler explosion. Will be repaired.

Troy, Ala.—The grist mill of James Sikes.

The cotton gins of C. T. Taliaferro, Evergreen, Ala.; W. H. Robinson, in Fairfield county, S. C.; R. R. Campbell, Concordia parish, La.; Stephen G. Miles, Marion county, S. C.; C. M. Faulkner, Paradise, Texas; Lane & O'Neil, near Butler, Ga.; B. Seaton, near Plummerville, Ark.; R. L. Castleman, in Concordia parish, La.; J. F. Shaw, near Montgomery, La.; J. S. Dixon, near Natchitoches, La.; George W. Platt, near Hillsboro, Texas; William Coe, Farmington, Texas; Rhodes & Eddy, Floresville, Texas; J. F. Griffin, Demopolis, Ala.; S. Boatwright, Ridge Springs, S. C.; D. F. Weaver, Weaver's Station, Ala.; J. McReynolds, near Weaver's Station, Ala.; Mr. Howlett, near Birmingham, Ala.; H. C. Dockery, Richmond county, N. C.; J. D. Browder, Gallion, Ala.; J. D. McGill, in Tensas parish, La.; Henry Luckett, Rapides parish, La., and R. W. Hale, Jolly, Ga., have been burned. The last-named will rebuild.

BUENA VISTA, VA., Nov. 30, 1889.—Negotiations are pending for erection of a second furnace at Buena Vista; not yet completed. Negotiations are also pending for the establishment of a rolling mill; also several other large enterprises.

A. P. BARCLAY, Pres.

## Building Notes.

Albany, Ga.—The Baptists will erect a church to cost \$10,000.

Alexandria, Va.—The Alexandria & Pineville Building & Loan Association has been organized with a capital stock of \$250,000.

Altoona, La.—John P. Richardson, of Chattanooga, Tenn., and W. P. Richardson, of Altoona, will establish a town at Altoona, and are reported as to erect 160 double cottages, 4 stores, 4 churches and 8 houses for superintendents.

Americus, Ga.—Hotel.—The Americus Manufacturing & Improvement Co. has been organized and will erect a hotel.

Asheville, N. C.—Hotel.—The Southern Coal, Iron & Railroad Co. is reported as to build a large hotel to be about 350x100 feet and contain 200 or more rooms. The estimated cost, exclusive of frescoing and furnishing, is \$100,000. L. C. Woolkins, chief engineer, Boston, Mass., can give particulars.

Athens, Ga.—Hotel.—The erection of a new hotel is being agitated.

Atlanta, Ga.—The Boyd & Baxter Furniture Factory will erect a new warehouse 50x100 feet, four stories high.

Atlanta, Ga.—Moses Lisses, contractor, will erect an \$8,000 residence for John T. Hallman.

Baltimore, Md.—Charles J. Bonaparte is remodeling a warehouse. The reconstruction will cost about \$25,000.

Baltimore, Md.—The Baltimore Traction Co., previously mentioned, will erect two power-houses. Henry Brauns is the architect.

Baltimore, Md.—Otto Goldbach will erect ten dwellings to cost \$12,000; James C. Dawling, nine dwellings to cost \$14,000 and ten dwellings to cost \$17,000; Wm. Butler, five dwellings to cost \$15,000 and five to cost \$10,000; James H. McAfee, four dwellings to cost \$24,000; George W. Ellender, one dwelling to cost \$5,000; John E. Heisner, one dwelling to cost \$5,000; Samuel T. Shipley, twelve dwellings to cost \$13,000; Hilitz & Kratz, builders, Philadelphia, a dwelling to cost \$40,000; Matilda Forbes, a dwelling to cost \$25,000; James G. Wilson will remodel a dwelling to cost \$12,000.

Blowing Rock, N. C.—The Methodists and Baptists are each contemplating the erection of churches. The Episcopalians are also agitating the building of a house of worship.

Birmingham, Ala.—Howard College, which was planned two years ago, will, it is stated, erect main building shortly.

Birmingham, Ala.—M. S. Potter will erect a three-story business building to cost \$30,000.

Brunswick, Ga.—The First National Bank is erecting a new building.

Cedartown, Ga.—A branch of the National Mutual Building & Loan Association of New York has been organized.

Clifton Forge, Va.—It is stated that the Chesapeake & Ohio Railway Co. (office Richmond, Va.) will build a \$60,000 hotel, and also a large depot.

Corpus Christi, Texas.—A branch of the National Building & Loan Association of Minneapolis, Minn., has been organized.

Dallas, Texas.—Thomas Field will erect a six-story building, 47x200 feet, to cost \$60,000.

Dallas, Texas.—George M. Dilley will erect a two-story dwelling with stables, 6x78 feet, to cost \$40,000.

Darien, Ga.—The county commissioners of McIntosh county invite proposals until December 18 for the erection of a pauper-house. W. S. McIntosh, clerk, has specifications.

Darlington, S. C.—The Cheraw & Darlington Railroad Co. (office Cheraw, S. C.) will erect a passenger and freight station.

Dublin, Ga.—Jones & Hicks are erecting a three-story building 90x90 feet.

Dalton, Ga.—Dr. Peak has let the contract for building a \$10,000 residence to D. J. Oxford.

Elberton, Ga.—Hotel.—The stock company previously mentioned will erect a four-story hotel to be completed by June 1, 1890.

Fort Smith, Ark.—The contract for furnishing the electric light and gas fixtures for the new government building has been awarded to E. Baggott, of Chicago, Ill.

Fort Worth, Texas.—The Cumberland Presbyterian Church will erect a building for the Texas Chautauqua in some part of the State.

Fort Worth, Texas.—The Gazette Building & Savings Association has been organized with a capital stock of \$100,000.

Friar's Point, Miss.—A branch of the Columbus (Ga.) Interstate Building & Loan Association has been organized with John H. Shenkle as president.

Georgetown, Ky.—Ground has been broken for the new Catholic Church previously mentioned.

Hagerstown, Md.—The Baltimore & Ohio Railroad Co. (office Baltimore, Md.) contemplate the erection of a passenger station.

Houston, Texas.—A branch of the Interstate



Building & Loan Association, of Columbus, Ga., is contemplated.

Houston, Texas.—The Minneapolis National Building & Loan Association is endeavoring to organize a branch in Houston.

Ivanhoe Furnace, Va.—Hotel.—It is stated that the Norfolk & Western Railroad Co. (office Roanoke, Va.) contemplates erecting a hotel.

Jonesville, S. C.—A branch of the Southern Mutual Building & Loan Association, of Atlanta, Ga., has been organized with T. L. Hames, president.

Key West, Fla.—The board of county commissioners of Monroe county have extended the time for opening the proposals for the erection of the new county courthouse, previously mentioned, to the 5th of December. The estimated cost is \$18,000.

Little Rock, Ark.—Jacob Katzenstein will erect a \$10,000 residence.

Little Rock, Ark.—The erection of a new state house is contemplated, as is also the building of a new city hall.

Little Rock, Ark.—Orlopf & Kusener are the successful architects for the new county hospital. It will cost \$30,000.

Little Rock, Ark.—A building for the Women's Industrial Home will be erected.

Louisville, Ky.—The capital stock of the Portland Savings & Loan Association, mentioned last week, is \$3,000,000. John Fowler is president.

Louisville, Ky.—The Pendennis Club contemplates the addition of another story to its clubhouse.

Memphis, Tenn.—The Chickasaw Club contemplates the erection of a new clubhouse.

Meridian, Miss.—The East Mississippi Female College contemplates the enlargement of their building at a cost of \$10,000.

Montezuma, Ga.—The charter of Planters' Warehouse Co. has been renewed.

Mount Vernon, Ala.—A new Catholic Church will be erected.

Nashville, Tenn.—The Peabody Normal Institute will probably erect several new buildings for school purposes.

Oviedo, Ala.—The Clyde Steamship Co. (office New York) will erect a wharf at Lake Jessup to cost about \$8,000.

Opelika, Ala.—The contract for erecting the new Lee county jail mentioned last week has been awarded to the Pauly Jail & Manufacturing Co. of St. Louis, Mo.

Oglethorpe, Ga.—C. R. Keene & Son are erecting a guano warehouse.

Raleigh, N. C.—The erection of a Y. M. C. A. building is contemplated.

Richmond, Va.—Louis Ginter will erect a four-story building 110x135 feet, to be heated by steam and to cost \$65,000.

Rolling Fork, Miss.—Hotel.—It is stated that Major Pemberton will erect a \$7,000 hotel.

Savannah, Ga.—It is reported that the Central Railroad & Banking Co. of Georgia will erect a warehouse 40x300 feet.

St. Marks, Fla.—It is reported that the Newport Springs Land & Improvement Co. will build a sanitarium at Newport Sulphur Springs.

Suffolk, Va.—S. R. Dunn will erect a residence to cost \$9,500. Geo. C. Moser is the architect and E. Tallerson has the contract.

Texarkana, Ark.—Depot.—The St. Louis, Iron Mountain & Southern Railroad Co. (office, St. Louis, Mo.) will build a depot to cost \$50,000.

Timmonsville, S. C.—A branch of the Huntsville (Ala.) Building & Loan Association has been organized with John McSweeney as president.

Uvalde, Texas.—A branch of the American Building & Loan Association and the Tontine Savings Association has been organized.

Washington, D. C.—Barr & Sanner will erect a dwelling to cost \$7,000; also 4 three-story dwellings to cost \$22,000; plans have been made for a Washington syndicate by John G. Meyers for 8 four-story dwellings to cost \$110,000; by the same architect for two dwellings to cost \$24,000.

Westminster, Md.—The congregations of the Lutheran and German Reformed Churches will erect new houses of worship.

Wheeling, W. Va.—The commissioners of Ohio county contemplate the erection of a new jail.

Wylie, Texas.—The contract for the new college building, previously mentioned, has been let. The building is 40x40 feet.

## MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Air Compressor.—The Eureka Fertilizer Co., Perryville, Md., want a second-hand high speed dry air compressor in good order, with 6-inch steam and 4-inch air cylinder and 1½ steam and 1½-inch exhaust pipe.

Boiler and Engine.—F. Derwent, Chattanooga, Tenn., will purchase a 15 or 20 horse-power boiler and engine.

Boiler and Engine.—The Dallas Screen Co., Dallas, Texas, will purchase a boiler and engine this fall.

Boiler and Engine.—B. W. Miller, Cedar Point, Va., will purchase an 8 horse-power boiler and engine.

Boilers and Engine.—Flaccus Bros., Wheeling, W. Va., will purchase two 50-inch by 14 feet tubular boilers and a 25 to 35 horse-power engine.

Boiler.—Townley Bros., Bay, Ark., will purchase boiler for a shingle mill.

Boiler.—Thomas Norris, Thomson, Ga., will purchase a new boiler for saw mill.

Bolt and Nut Factory.—D. G. Mitchell, Anniston, Ala., wants prices on machinery for a bolt and nut factory.

Bridge Works.—The Potomac Bridge Works, Frederick, Md., is in the market for bridge and iron and steel structural machinery.

Canning Factory.—The Berkely Canning & Manufacturing Co., Mt. Pleasant, S. C., will purchase some canning machinery.

Canning Factory.—Flaccus Bros., Wheeling, W. Va., will purchase a complete outfit for a canning factory.

Corn Mill, &c.—Blevin & Craven, Dardanelle, Ark., will purchase a corn mill and probably a flour mill.

Cotton Mill.—V. & A. Meyer & Co., New Orleans, La., want estimates on new machinery for a cotton mill at Port Gibson, Miss.

Cotton-seed Oil Mill.—J. B. Hobb, Blakely, Ga., will probably purchase machinery for a cotton-seed oil mill.

Drag Saw.—Townley Bros., Bay, Ark., want a drag saw for a shingle mill.

Dynamo.—Flaccus Bros., Wheeling, W. Va., will purchase a small dynamo.

Elevator Buckets, &c.—Hammer & Teague, High Point, N. C., want elevator buckets, belting and iron roofing.

Engine, &c.—The Charleston Mattress Manufacturing Co., Charleston, S. C., want a moss picking machine, husk hackler and 2 horse-power engine on wheels, so as to move around from one farm to another.

Engine and Boiler.—C. F. Rea, Prairie Plains, Texas, will purchase next year a new engine and boiler.

Engine and Boiler, &c.—Isaac Davis, of 300 Clinton street, Trenton, N. J., is investigating kaolin deposits near Rock Springs, Md., and if found in sufficient quantity will want an engine and boiler, pump and other machinery.

Engine.—Keisler & Bro., Prairie Plains, Texas, want an engine for saw mill.

Fibre Machinery.—W. E. H. Searcy, Griffin, Ga., wants machinery for stripping the bark from fibrous plants—plant size of a knitting needle to size of the thumb. Also wants address of manufacturers of flax machinery.

Flour Mill, &c.—Hammer & Teague, High Point, N. C., want mill for wheat; also corn and cob crusher.

Flour Mill.—A. Suter & Bro., Woodlands, W. Va., will purchase machinery for a roller process flour mill to have a capacity of 30 barrels per 24 hours.

Machine Shop.—F. Derwent, Chattanooga, Tenn., expects to establish a machine shop at some point in the South, and will want power punch, bending rolls and other tools.

Machine Shop.—T. W. Dexter, Brunswick, Ga., wants estimates on tools for a machine shop, foundry and blacksmith shop.

Marine Engine, &c.—Edwin S. Shuey, Gainesville, Fla., will want an engine for a steamboat to be built by him; also steamboat supplies.

Ore Mill.—The Shelby Rolling Mill Co., Helena, Ala., want second-hand ore mill.

Planer, &c.—B. W. Miller, Cedar Point, Va., will purchase a pony planer, carving machine and belting.

Rails, Spikes, &c.—W. R. Burgess, Greensboro,

## HETHERINGTON & NASON,

Manufacturers and Dealers in Supplies for

### Boiler Makers, Machinists, Railroads, Steam & Gas Fitters

Boiler Plate and Tank Iron, Lap-Welded Pipe and Boiler Tubes, Boiler and Sheet Iron Rivets, Steam Brass Goods and Engine Trimmings, Iron Valves and Fittings, Pipe Workers' and Machinists' Tools, Wood and Iron Pulleys, Belting, Hose and Packing, SEWER PIPE, FIRE BRICK and CLAY.

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Cheapest and best Steam Generators on the market.

RESULTS GUARANTEED.

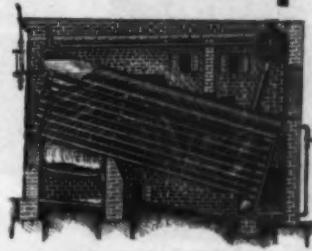
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IRON FOUNDERS,

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ALICE ANNA & EDEN STREETS, BALTIMORE, MD.

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at any distance from source by ELECTRICAL TRANSMISSION. The simplest, cleanest and cheapest to operate for Mining, Street Railways, Electric Lighting and Manufacturing.

G. S. VAN NUIS, Constructing Electrical Engineer, 18 CORTLANDT STREET, NEW YORK.

O. R. MAKEPEACE & CO. ARCHITECTS and MILL ENGINEERS PROVIDENCE, R. I. Plans, Specifications and Estimates furnished for Cotton and Woollen Mills.

LOCKWOOD, GREENE & CO.

MILL ENGINEERS, NEWBURYPORT, MASS.

PLANS AND SPECIFICATIONS FURNISHED FOR THE CONSTRUCTION OF EQUIPMENT AND ORGANIZATION OF COTTON AND WOOLLEN MILLS.

N. C., wants lowest price for 35-D. new and second-hand rails, with spikes, splices, &c., complete, for five miles of track, the rails to be delivered at Keyser, N. C., on Raleigh & Augusta Railroad. Parties having such for sale should give condition and full particulars.

R. C. Bradley, Floral City, Fla., will purchase a machine next summer for cleaning the broom corn of the seed.

Shuttle Blocks.—The Lancaster Manufacturing Co., Lancaster, S. C., wants the address of parties dealing in dogwood and persimmon shuttle blocks.

Steam Pump.—The Eureka Fertilizer Co., Perryville, Md., wants a No. 3 Blake or Knowles steam pump.

Tank Float.—The Goulds Manufacturing Co., Seneca Falls, N. Y., wants the address of the manufacturer of a tank float which is made in two halves and put together without solder or brazing.

Veneer Dryer.—J. Y. Fetteys, McIntosh, Fla., wants to purchase a veneer dryer at once.

Wood-working Machinery.—The Dallas Screen Co., Dallas, Texas, will purchase this fall a mortiser, shaper, tenoner and comb saw.

## Great Activity at Laredo.

[Special Dispatch to MANUFACTURERS' RECORD.] LAREDO, TEXAS, Dec. 4, 1889.

A large meeting of wool raisers was held to-day to consider proposition of Northern manufacturers to move woolen mills to Laredo. A committee was appointed to raise half of the capital. The money required was nearly all subscribed; will raise more than enough to-morrow. Another mass meeting will be held Saturday to consider other propositions. Party now here from Georgia to establish one hundred thousand dollar cotton factory. City enthused and city council offering land within city limits valued at one hundred thousand dollars as inducement for manufacturing enterprise. Another company, capital \$100,000, organized here last night for the further development of the city; home and foreign capital concerned. Laredo Foundry & Machine Co. has begun foundation for their fifty thousand dollar foundry and machine shops. Manager Laredo Cotton Gin & Milling Co. now in East purchasing machinery. First trial trip on electric street motor to-morrow. The Laredo Improvement Co. ready to close for fifty arc and one thousand incandescent lights. Party here prospecting for tannery. Hotel Hamilton, which cost one hundred thousand dollars, thrown open to public. Contracts given for twenty residences and stores this week. WM. OLIVER, Asst. Sec. Board of Trade.

## The BOOMER & BOSCHERT

KNUCKLE JOINT

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Cloth, Paper, Yarn, &c.

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## STEAM DREDGERS, PILE DRIVERS.

VULCAN IRON WORKS, Chicago.

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### Electrical ENGINEER

## Consulting Electrician,

80 Fifth Ave., New York.

Tests, Measurements and Estimates of all kinds. Sole agent of the Phoenix Incandescent Lamp Co. Lamps for any System and Candle Power.

WRITE FOR PRICES TO THE SOUTHERN EQUIPMENT CO.

Representing reliable manufacturers of Railway, Mining and Mill Supplies.

ORDERS FILLED PROMPTLY. Chattanooga, Tenn.

POPULAR AND DIRECT ROUTE.

## THE BAY LINE

For Old Point Comfort, Norfolk and the South.

Steamers leave daily (except Sunday) Union Dock 6.30 P. M., Canton Wharf 7 P. M.; arrives Old Point Comfort 7 A. M., at Norfolk at 8 A. M., Portsmouth 8.15 A. M. At OLD POINT COMFORT connect with CHESAPEAKE & OHIO RAILROAD for Richmond, Charlottesville, Greenbrier, White Sulphur Springs, Louisville, Cincinnati and all points West. At NORFOLK with NORFOLK & WESTERN RAILROAD for Petersburg, Richmond, Lynchburg, Roanoke, Bristol, Knoxville, Chattanooga, Memphis and the Southwest; also with the NORFOLK SOUTHERN RAILROAD for Elizabeth City, Edenton and Eastern North Carolina. At PORTSMOUTH, VA., with SEABOARD & ROANOKE RAILROAD for Weldon, Raleigh, Southern Pines, Charlotte, Fayetteville, Newberne, Wilmington, Charleston, Columbia, Augusta, Savannah, Jacksonville and all PRINCIPAL SOUTHERN CITIES.

Palace Steamers, Unsurpassed Cuisine, Uninterrupted Night's Rest, Sure Connection. For Tickets and Information apply at Company's Office, 130 E. Baltimore St. or on board steamers. E. BROWN, G. T. A. Special Agent

## "See Us," page 44

The Fort Worth Loan & Construction Co. CAPITAL, FULLY PAID, \$100,000.

We are prepared to furnish plans and construct large buildings, public or private, and when desired carrying part of the cost of construction as a deferred payment.

PRINCIPAL BUSINESS OFFICE, FORT WORTH, TEXAS. EASTERN OFFICE, EQUITABLE BUILDING, BOSTON.



**Lath and Picket Mill No. 2.**

The accompanying illustration represents a simple and cheap but effective and powerful machine for slitting into laths lumber that has already been cut to dimensions, made by the H. B. Smith Machine Co., of Philadelphia.

As is usual with all machinery manufactured by this company, it is built entirely of metal, and the main frame is cast in one piece.

latter being their term for vertical engines.

The engraving does not show the piping and connections below the cylinder; but these are hardly necessary to this description.

may be seen by a glance at the back view represented herewith. High and low pressure valves are both operated automatically by the governor.

One may get from the engraving a very

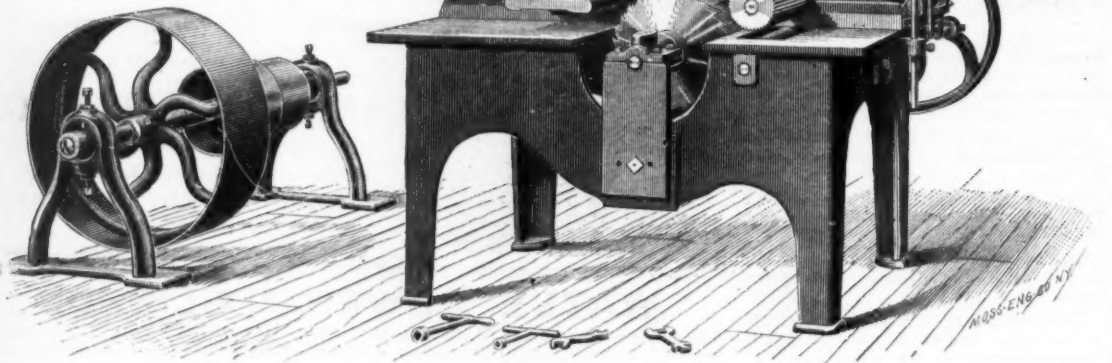
balanced from all pressure higher than the exhaust. To illustrate, it is stated, that, with a full head of steam on, both valves can be moved by the pressure of two fingers on the valve stem. The valves take steam from the inside, so that they can be operated with the chest cover off if it is desired to ascertain whether they are tight.

The pressure plate is covered by Rice's patents, and forms a valve for the escape of water and for relieving over-pressure in the cylinders. It does not rest on the valve, but is supported by the two scraping shoulders on each side of the valve.

The lubrication of this engine has been made as nearly perfect as possible. Every oil cup is stationary, with sight feed and adjustable cut-off.

An independent pump and condenser, or a power condenser connecting direct with the engine shaft, can be used, as the purchaser may prefer. In all the plants thus far installed by the John T. Noye Manufacturing Co., the Worthington independent condenser has been used and has given the best of satisfaction.

The compactness, smooth running, and economy of this engine should strongly commend it to electric light companies. Being of a few and simple parts, it is dur-



LATH AND PICKET MILL NO. 2.

The outer bearing is made in such a manner that by removing a single clamping bolt it may be taken off, giving ready access for arranging or removing the saws.

The arbor carrying the saws is of steel, running in boxes lined with the best babbit metal. The machine is usually made to run six saws, 12 inches in diameter.

Three sets of collars are furnished, turned to run flush with the table, thus supporting the laths between the saws. Their thickness is made to vary at the option of the purchaser.

As shown in the engraving, an adjustable pressure bar is used to hold the laths firmly and prevent them from being thrown by the saws while leaving the machine.

There are two feed rolls, an upper and under. Both rolls are adjustable, and the upper heavily weighted. The feed is 21 and 33 feet per minute, and is at all times under perfect control.

**The Rice Automatic Tandem Compound-Condensing Engine.**

The accompanying illustration relates to one of the newest and most economical types of compound engines. It is built by

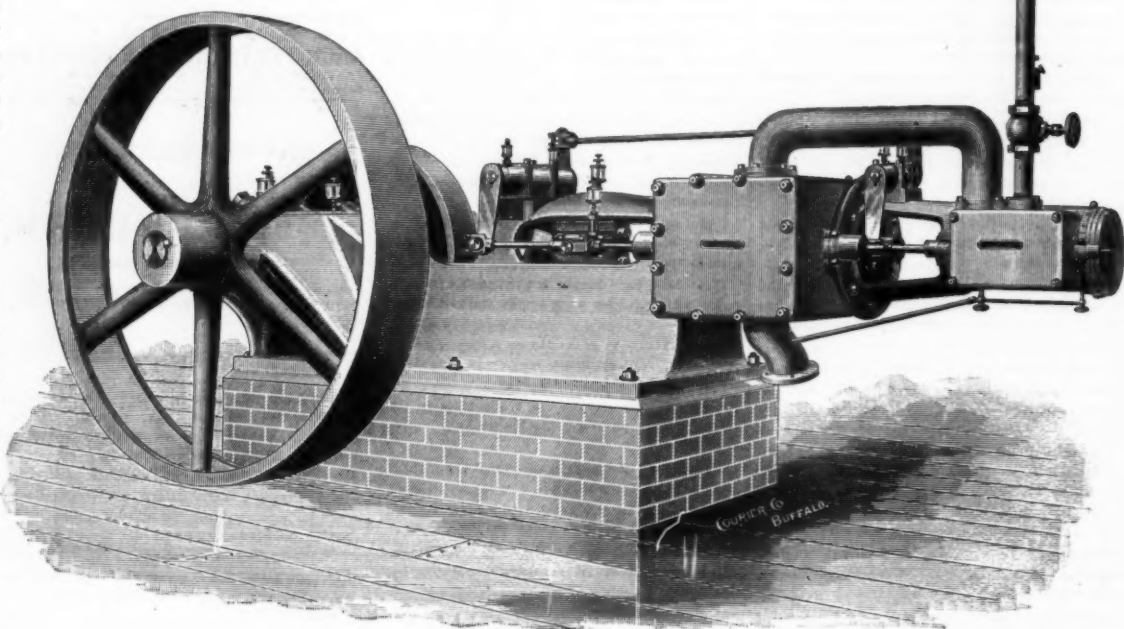


FIG. 2.—BACK VIEW.

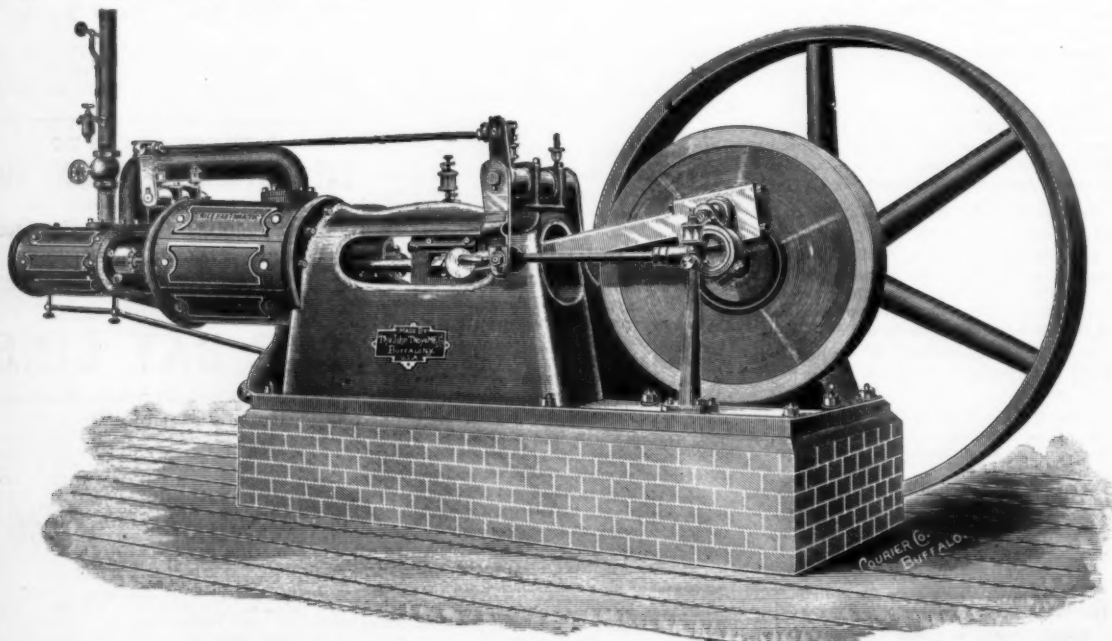


FIG. 1.—FRONT VIEW.

the John T. Noye Manufacturing Co., Buffalo, N. Y., under the patents of F. B. Rice, the well-known engineer, whose name it bears. This engine is built tandem, or, as marine men would say, "steeple form" the

The frame is of the same form as that used for standard Rice engines, and can be made self-contained or with an outside bearing, to suit special local requirements. The governor is inside the crank-disk, as

clear idea of the connection in the valve motion. Either valve can be set independently of the other, while the engine is in motion. The valve itself is an ordinary four-part or gridiron valve. It is perfectly

able and easily managed. Hitherto it has been used almost wholly for electric-light plants, the demand in that field being so great, but its points of superiority make it also highly desirable for general use in mills and factories.

Engines of this style are built of 50, 75 and 100 horse-power. For larger sizes a different form of bed is used—a bed that is lower and heavier, while the governor is placed in a separate case outside the disk. Patterns for 100 to 500 horse-power engines are now in this latter form, and others will be added as the need arises.

Electricians, engineers and others who may wish to inquire further about engines built by the Noye Co. are cordially invited to write or visit them, when full information will be gladly furnished.

The chief architect of the Treasury has made a new rule as to the matter of contractors' bonds. By the new plan the contractors' obligations are proportioned to the value of the building in hand, and amounts to from \$5,000 to \$70,000 on a \$50,000 or \$70,000 building, and stipulates for honest materials and good work.

NEW FACTORY AT FORT PAYNE—FORT PAYNE, ALA., Nov. 27, 1889.—The Alabama Lumber Co. will build a factory soon as possible for the manufacturing of dressed lumber for building purposes, including steam dryer of 10,000 feet capacity per day; also machinery for turning out carriage stock, &c. J. A. PARTRIDGE, Supt.



## MIDDLESBOROUGH'S BOOM.

## Enormous Investments in Coal Properties and New Industries.

## Great Activity in Real Estate.

[Spec. correspondance MANUFACTURERS' RECORD.]

MIDDLESBOROUGH, KY., Nov. 30, 1889.

For some time the croakers about here have been ringing into our ears the pleasing information that as soon as the winter set in well property would be a drug. If some of these could have been here during the past three days and observed the activity in dirt they would have changed their tune considerably. Property has advanced nearly 20 per cent. during that time, and last night, in the hotels alone, after supper, over \$58,000 worth of property was sold. During the past three days over \$200,000 of lots have been sold at rapidly advancing prices.

A party of Englishmen have just closed negotiations and completed the purchase of 260,000 acres of land adjoining the property of the American Association, and embracing most of the finest coal and timber lands in Bell and Harlan counties; the price paid for the property was \$1,500,000. It is their expectation to establish here at Middlesborough the largest coal, iron and steel enterprise in America.

Two more leases to manufacture fire-clay and sewer pipe were let last week, and on Friday two other applications were received which are now being considered.

The contract for 12 miles of the Belt Railroad was let on Tuesday last to Allison, Shafer & Co. This will tap all the coal openings that have been made thus far and afford transportation to the city direct.

O. W. Davis, Jr., has returned from the East and will commence work on his charcoal furnace by January 1st, and push it to completion as rapidly as men and money can do it. Work on the two coke furnaces is being pushed as rapidly as possible.

There are rumors on the street as I am writing of the close of the negotiations that have been pending to establish a large steel plant here. At this late hour I am unable to get particulars, but will furnish them in my next. Great excitement prevails here over this matter, and it is considered positive that this great institution belongs to Middlesborough.

Mr. George L. Reis, of the Middlesborough Steel, Iron & Coal Co., reports that his Pittsburgh friends have thoroughly tested the Pineville coke, and pronounce it the very best furnace coke now on the market in America. The high percentage of carbon, the low percentages of sulphur and ash, together with other good qualities, are accountable for this opinion. It is very gratifying to the American Association to learn of this, inasmuch as the Pineville coal seam underlies the whole property of the American Association, is more accessible at points than the Pineville seam at Pineville, and the coal they bought their properties for.

This now thoroughly proved coal region is further enhanced in value by the final location of the great Oriskany iron ore seam on the Association properties at Cumberland Gap, (the ore running in the furnace from 54 to 56 per cent. metallic iron and .012 to .024 phosphorus, with about 4 per cent. of silica,) 48 feet thick by 27 feet face.

The great stir amongst the steel, iron and coal masters, now arranging their plans for immediate development at Cumberland Gap, goes farther to prove the settled opinion of outsiders and capitalists than any other argument. T. H. A.

LATER—Special Dispatch.—Middlesborough real estate sales for week ending November 30 amount to \$200,000; very active demand. Gentlemen arrived in Middlesborough this week from London and New York are buying heavily. Additional contracts for industrial plants and improvements made during same week aggregate \$1,125,000.

## The Wells Light.

A need that has always been felt but hitherto unsupplied in all kinds of night construction work was a powerful, portable light.

With the hand lamps and torches that have been used almost solely with this class of work, what was accomplished was done at an extraordinary expense consequent upon the attention of the workmen having to be divided between their work and light used with it.

The Wells light, which achieved such an instantaneous success in England last year, where over 2,000 of them were sold, is now being put upon the American market by Messrs. Keegan & Halpin, 46 Washington street, New York, and from orders and inquiries received they are encouraged to believe that it will more than repeat its English success.

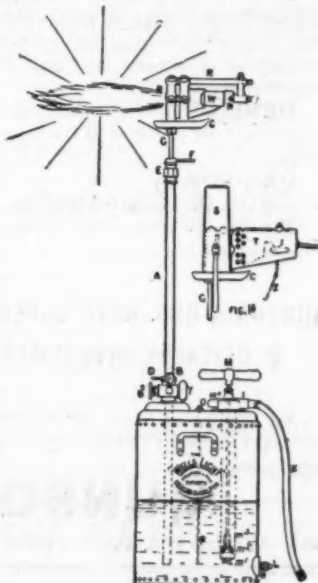


FIG. 1.

We illustrate one of the lights, showing the internal section of the steel tank, which is made perfectly air-tight. When the light is operated oil is first pumped into the tank by the aid of the pump M, until it is about two-thirds full; this action naturally compresses the air in the tank and the pump is again used if necessary to develop the pressure up to 20 pounds, as indicated by the gauge, and with this amount the light will run for four hours without further attention.

Preparatory to opening the valve B a small quantity of oil is placed in the dish C, and then lit while a chimney and back-guard cover the burner, as shown in Fig. 1 A, thereby directing all the heat into it. When sufficiently heated, which takes seven or eight minutes, the valve is opened when the pneumatic pressure drives the oil through the stand-pipe A, running from near the bottom of the tank to the burner.

When the oil reaches the generating rings of the burner it is vaporized, and passing out of the jet N through the rings keeps them properly hot, and as there is an excess of heating surface allowed in the rings, the light burns as well in bad weather, and is not affected by the rain cooling them partially nor by the wind, as the burner can be swivelled to run with it.

The whole apparatus is simple and strongly made; any laborer after once instructed can manage it successfully. They are given solely into the care of the laborers on the Manchester ship canal in England, and are the only artificial lights used on this great engineering enterprise, which could not have proceeded nearly as fast without them.

The burners are adapted to the use of 150° kerosene oil, which is obtainable all over the country.

We also illustrate the No. 1 light, showing

ing how readily it can be carried about the work from place to place where the job is not very extensive.



FIG. 2.

Different arrangements are made to suit the lights to all purposes, such as a carriage to carry it about, a tripod stand so that the light may be situated away from the tank when it is not handy for lack of room, as well as different styles of posts for elevating the light in fixed places.

When the following valuable and useful features of this invention are fully appreciated, that it gives a powerful light, is portable, entirely self-contained, requiring no outside motive power, simple in construction, easy to manage and requires little attention, it will be seen at once how necessary it will become to all those having night work to do, and that its success is well assured.

## Salem, Va., Is On a Boom.

SALEM, VA., December 2, 1889.

Editor Manufacturers' Record:

Since my last letter to the MANUFACTURERS' RECORD the business interests of this booming town have gone steadily onward. There is a consensus of energy, push and pluck here that cannot fail to tell and to turn many of nature's gifts to man's advantage. Everything is moving forward to success on the lines indicated in our letter of two weeks ago. Since that time very much has been done in laying off and grading the new streets preparatory to the first public sale of lots on December 11th, at noon. There is lively inquiry about lots, and the dozen real estate firms are busy corresponding with their friends.

The Norfolk & Western Railroad will very soon lay a double track between Roanoke and Salem, and this will then be extended as far west as Radford. A fine passenger station costing \$20,000 is to be erected at once at the foot of Alabama street. While the railroad is thus improving its line and station, the Salem Improvement Co. will also put up a brick building, 50x80 feet, three stories high, for banking and office purposes. In a few days two brick plants, one from Washington and the other from Philadelphia, will be ready to make an output of 100,000 bricks per day. Other manufacturing enterprises, employing several hundred skilled mechanics, are on the tapis, but we will not mention them yet, as we intend to confine ourselves strictly to facts, which is business. After the sale of lots on the 11th of December you shall hear from us again.

SCRIPTOR.

IMPORTANT ENTERPRISES.—Mr. Walter T. Forbes, of Forbes & McCrary, Atlanta, Ga., in a letter to the MANUFACTURERS' RECORD says: "My associates and I have a perfected process for recovering the silky fibre from the ramie plants. By a very simple and inexpensive chemical process we dissolve the bark, and eliminate all the gummy and resinous matters incasing the fibre, and, by a still more simple process, we bleach it white by a cold process that does not impair the strength or texture of it. We recover every fibre in its full length unbroken. We can treat two tons at a time of the ribbon. We find that the pine straw and the bark of the cotton

stalk yield excellent results by the same process. The pits and maguey and pineapple plants also readily yield to this process. We expect to organize a strong company to introduce the process and apparatus in all the Southern States and Mexico. The firm of Forbes & McCrary, of Kansas City and Atlanta, Georgia, are now negotiating for the erection and operation of one of the largest cotton mills in the South, to be located at Greenville, Miss. In connection with this plant will be one of the largest ginneries in the South. The cotton will be purchased in the seed on the plantations adjacent, shipped to the mill, and then ginned, spun and made into cloth. By this plan we claim to save eight dollars per bale over any manufactory in the United States in the handling of every bale of cotton we utilize, besides the profits accruing from the seed. The capital stock is put at \$300,000, of which \$50,000 has been subscribed.

## PROPOSALS.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 17th day of December, 1889, for all the labor and material required to fix in place complete the low-pressure return-circulation steam-heating apparatus for the church building (temporary U. S. Custom House and Postoffice) at Newark, N. J., in accordance with the drawings and specifications, copies of which may be had on application at this office and the office of the Superintendent. Each bid must be accompanied by a certified check for \$100. The Department will reject all bids received after the time fixed for opening the same; also the bids which do not comply strictly with all the requirements of this invitation. JAS. H. WINDRIM, Supervising Architect. December 2d, 1889.

## WANTS.

WANTED.—A good practical traveling salesman, thoroughly conversant with laboratory saving machinery at mines. Address THE SOUTHERN EQUIPMENT CO., Chattanooga, Tenn.

WANTED.—Situation as Superintendent of a Cotton Mill on damacks, chevrons, ginghams and other lines of goods by a man of thorough experience and satisfactory references. The advertiser is a practised workman, and has had a wide range of employment. Address J. O'DONELL, Bank P. O., Cecil Co., Md.

WANTED.—A position as Cloth Overseer in a Cotton Mill on damacks, chevrons, ginghams and other lines of goods by a man of thorough experience and satisfactory references. The advertiser is a practised workman, and has had a wide range of employment. Address J. O'DONELL, Bank P. O., Cecil Co., Md.

## FOR SALE.

## DARLINGTON LAND IMPROVEMENT CO.

Lots within the incorporate limits of the town of Darlington, and fine farming lands adjacent, for sale. Railroad facilities good. Fine graded school in town. For further particulars apply to J. J. WARD, President and Treasurer of Darlington Land Improvement Co., Darlington, S. C.

## Texas Ranch For Sale

of 38,000 acres in a solid body, well improved; comprising a peninsula on the Gulf coast near the harbors of Corpus Christi and Aransas Pass. Land good; well suited for cultivation; soil rich; excellent native grass; no cold weather; no feeding needed; cattle graze through the year. Locality healthy; Gulf breeze makes summers cool. Fish and oysters plenty. Wild ducks and geese abundant. As a breeding ground for cattle, mules or horses, this locality is not surpassed in the world. The cattle on this ranch, raised on it, for sale at market prices. Price of the land \$3.00 per acre. Send for circular and map.

S. M. SMITH,

FORT WORTH, TEXAS.

## Gas Plant for Sale.

The Gas Plant at Richmond, Ky., (a city of 6,000 inhabitants,) with 125 private consumers and city using gas at a profitable rate, is offered for sale privately. ALSO A COMPLETE WATER WORKS, charter granted by the legislature of Kentucky. The city is anxious to subscribe stock or will take a sufficient number of hydrants to make it a paying investment. Also an electric light charter from same source. The city is willing to make a contract for public light. The above property is owned by a corporation, and individuals who wish to close out at once. Persons desiring to buy will communicate with or call on

G. W. EVANS, Pres., or

CHAS. S. POWELL, Secy.,

RICHMOND, KY.

## NOTICE

To Contractors or Manufacturers of Heating and Plumbing Appliances, Elevators, &c.

I require in hotel of about 120 rooms, six stories, length 117 ft. x 100, to be heated with steam, and thoroughly fitted with wash-basins, bath-tubs, urinals, etc. and gas fittings; also passenger elevator and appliances for working same by air and water from an accumulator. An iron tank of not less than three thousand gallons on roof of building, etc., etc.

I am prepared to enter into contracts with a responsible party, with cash payment on satisfactory completion of this work.

The plans and premises can be viewed in Roanoke until December 15th, 1889. Satisfactory references can be given.

O. G. SMITH,

Commercial Hotel, ROANOKE, VA.



**500 Per Cent. in Land.**

2,500 acres, lying west. Adjoining city limits at Augusta, Georgia. The largest cotton manufacturing city in the South. High rolling land, joining P. J. Berckman's extensive nurseries—the only available land for city extension. Only needs rapid transit to become at once saleable at \$500 to \$1,000 per acre. Can be bought now at \$50 to \$100 per acre in part or whole. No finer suburban lands in the South.

Investors and builders of suburban railways invited to investigate this field for development of profitable enterprise. Address  
**J. H. ALEXANDER, Augusta, Ga.**

**AN ELEGANT CHANCE**

or a PROSPEROUS BUSINESS in a Southern City of 100,000 inhabitants.

**A THOROUGHLY-EQUIPPED  
FOUNDRY**

of twenty tons daily capacity, to lease for a term of years. Fixtures for sale at cost and valuable contracts guaranteed. For particulars address "BOOM," in care of the Manufacturers' Record.

**To Those Looking For  
MANUFACTURING SITES  
IN THE SOUTH**

The most desirable locations in the South for manufacturing wagons, stoves, agricultural implements, furniture, or for foundries, machine shops, rolling mills, muck bar mills, nail works, glass works, cotton or woolen mills, and tanneries, are to be found in Virginia along the line of the Norfolk & Western Railroad from Norfolk to Bristol, and upon its branch lines. Hard wood of every variety; pig iron from the furnaces at Lynchburg (2), Roanoke (2) in operation and 1 now under construction), Pulaski (1), Ivanhoe (1), Radford (1, to be built in 1890), Salem, Graham and Max Meadows (1 at each point now under construction); bar iron from the rolling mills at Roanoke and Lynchburg; coke and semi-bituminous coal from the Pocahontas Flat Top field; superior gas coals from mines on the Clinch Valley Extension; glass sand from Tazewell county; cotton from the markets of the Southern States, and wool from all the Western and South-western States and Territories at advantageous freight rates. Favorable freight rates made upon raw materials to all factories established upon its line, as well as to points in the United States and Territories upon the manufactured articles.

Those seeking new fields for manufacturing establishments should not fail to investigate the wonderful development in iron, coal and coke industries that has been made within the past five years along the line of the Norfolk & Western Railroad, and the advantages offered by the State of Virginia in the supply of cheap raw materials; by the Norfolk & Western Railroad in the matter of freight facilities and rates upon raw materials and for reaching home, far distant and foreign markets, and by the cities and towns along its line in the way of advantageous sites at moderate cost. Many of the cities and towns exempt manufacturing establishments from taxation for a series of years.

For further information as to freight rates and sources of supply of raw materials, apply to A. Pope, General Freight Agent, Roanoke, Va., or to

**CHAS. G. EDDY,**  
Vice-President, Roanoke, Va.

**To Manufacturers**

Desiring a Staple Article on Royalty or Shop Right. For particulars of the "Landis Patent Steam and Hot Water Radiator" address **EZRA F. LANDIS,** LANCASTER, PA.

**Canning Factories**

ESTABLISHED AND BUILT.

ALSO  
**SUPERINTENDENTS FURNISHED**  
To take charge of Factories.

ADDRESS  
**C. PALMER MFG. CO., Blair, Nebraska.**

**SPECIAL INDUCEMENTS  
OFFERED  
MANUFACTURERS.**

**Manufacturing Sites, Mills, Farms,  
and Village Property,**

for sale by

**J. L. MOON, Scottsville, Va.**

**A SPLENDID OPPORTUNITY**

to secure a well-established Business in a Growing Southern City of over 80,000 inhabitants.

For Lease and Fixtures for Sale,

**A Modern Boiler Shop**

thoroughly equipped with power and water and the latest and most improved Punches, Shears, Rolls, Planers, Overhead Cranes, Riveting Machinery, Sheet Iron and Hand Tools. Railroad switch enters shop. Capacity for four hundred Boilers per year. The proper party can secure these works on favorable terms, and can pay for the tools out of orders that owners will guarantee. Address "INDUSTRY," care of Manufacturers' Record.

**CAMDEN,**

**The Capital of Kershaw County,  
South Carolina.**

This ancient and historic town is noted for its dry atmosphere, pure water, beautiful scenery, healthful climate and refined society.

It is the center of a rich agricultural country, which contains great natural resources. Hardwoods of many species are abundant, and great forests of long leaf pine, which impregnate the air with terebenthine odors. Several good hotels entertain travelers, and two are carefully conducted for the especial comfort of northern health and pleasure seekers.

Manufacturing of all kinds can be done here advantageously. Two railroads, the South Carolina and the Charleston, Cincinnati & Chicago, furnish transportation to all parts of the country. Two telegraph lines, the Postal and the Western Union, have offices here.

Churches and schools are numerous and well sustained.

A cotton mill company has been organized, and the first installment of twenty per cent. has been called in.

Land is cheap. The climate is salubrious, and subject to no extremes during the year.

Camden invites capitalists, manufacturers, pleasure and health seekers and sportsmen to visit the city and examine the advantages it offers to all.

All inquiries will be promptly answered by the undersigned, official representative of the intendand and warders.

**DR. JOHN W. CORBETT**

Or the President of the Board of Trade.

**DENISON,  
TEXAS.**

THE

**Future Manufacturing and Commercial Center**

OF THE

**GREAT SOUTHWEST.****Denison Supplies the Coal for Texas.**

She has at her gates the only **COKING COAL** of any value in the Mississippi Valley. To the Southwest lies the best **MAGNETIC IRON ORE** in the world, while to the north and southeast are fields of **BROWN HEMATITE ORE** of the finest grade. These ores must meet the **COKE** and **COAL** at **DENISON** and there be worked.

**DENISON** cannot be surpassed for **HEALTHFULNESS** and **BEAUTY** of location. Six divisions of railways terminate at Denison and are operated by her citizens.

**DENISON** has an abundant supply of pure, soft water and plenty of good, cheap **BUILDING MATERIAL.**

The attention of investors and those seeking advantageous locations for business or for manufacturing plants is invited to the opportunities presented at Denison.

**MUNSON & BRO. HAVE SUPERIOR FACILITIES FOR THE SAFE AND  
P OFITABLE INVESTMENT AND HANDLING OF CAPITAL.**

For information about **DENISON** and for bargains in **BUSINESS** and **RESIDENCE PROPERTY**, **ACRE PROPERTY** and **FARMS NEAR THE CITY**, write or call upon

**MUNSON & BRO.**

**301 WOODWARD STREET, DENISON, TEXAS.**

**To Manufacturers.****Arkansas Investments.****FOR SALE  
FOR CASH.**

A 48-inch Turbine Water Wheel, with casing; manufactured by James A. Davis, Macon, Ga.; develops 21 horse-power under six-foot head; using 1,184 cubic feet of water per minute, and making 71 revolutions; develops under a ten-foot head 45½ horse-power; using 1,500 cubic feet of water per minute, and making 92 revolutions. Will sell for \$200. The wheel is new; never been used. Price at factory \$420. Address

**W. T. YELVERTON,**

Assignee of R. E. JONES, GOLDSBORO, N. C.

**Lime and Marble Quarries****FOR SALE.**

In Virginia, a tract of 750 acres, partly timbered, balance suited for agriculture and grazing, being well watered; containing also practically inexhaustible quarries of limestone and marble. The marble is blue, gray and pink, suitable for building or for soda fountains, counters, tessellated floors, buildings, &c. Easily quarried; water-power on spot. Lime is of established reputation and best quality sold for years, commanding ready sale for whole output in carload lots at large profits per barrel. Situated within two-thirds of a mile of two railroads. Beds of Yellow Ochre for sale also. For full particulars apply to

**CHAS. L. WILSON,**

Buchanan, Botetourt Co., Va.

**FREE SITES** and **Coal 25 cents per ton** to manufacturers desiring location in the Southwest. Cotton, Timber, Limestone, Iron, Coal Lands and Town Lots for Sale. Investments made for non-residents.

**HUNTINGTON,**

Sebastian County, of two years' growth. Population over 2,000. Lies in the heart of the mineral district. Correspondence solicited.

**A. L. RAYMOND, General Agent,  
Huntington Town Co., Huntington, Ark.**

**J. H. PRATT,**

**Analytical Chemist,**

**Laboratory 1826 Third Ave., Birmingham, Ala.**

**Analyses of Ores, Slags and Coals carefully made.  
Reports on properties, etc.**

**For Sale  
BOILERS.**

**41 Second-Hand and 23 New Boilers,**

**13 Second-Hand and 19 New**

**ENGINES.**

At buyers' prices. Address

**CASEY BOILER MFG. CO. Chattanooga, Tenn**

**FOR SALE.**

**12-ton ice plant (Pictet) all complete and  
and in first-class order, can be had at one-  
third cost, and been in use only one year.**

For particulars Inquire of

**SO. FLORIDA FOUNDRY & MACHINE CO.,**

**ORLANDO, FLA.**

**FOR SALE**

**TO THE HIGHEST BIDDER,**

**THE TERRELL**

**Cotton and Woolen Mill,**

located in Terrell, 32 miles east of Dallas, on the Texas & Pacific Railroad, consisting of one two-story brick, tin-roof building, 150x60 feet, and the machinery necessary for a 2,200-spindle mill, with 36 looms, all in position. Will be sold to the highest bidder on the 22d day of January, 1890. Address

**TERRELL COTTON AND WOOLEN MFG. CO.**

**TERRELL, TEXAS.**



**For Sale Cheap.**

450 Standard Gauge Gondola or Coal Cars.

For description, prices and terms address

**A. S. MALES & CO., Cincinnati, O.**

If interested send for catalogue No. 12 of second-hand, and circular No. 27 of new rolling stock, etc.

**Steam Fire Engines****FOR SALE.**

One Hunneman and one Button in first-class condition. Also all kinds of second-hand Engines and Boilers for sale cheap. For terms, prices, &amp;c., address

**Lowell Steam Boiler Works,****LOWELL, MASS.**

Estimates given on New Work of every description.

**FOR SALE.**

Five Single Surfacters. Three Double Surfacters. Three eight-inch Matchers (four-sided). Two fourteen-inch Matchers (four-sided). Two twenty-four-inch Matchers (three-sided).

**ALL SECOND-HAND. Send for full list to****THE PREBLE MACHINE WORKS CO.**

38 &amp; 40 W. MONROE ST., CHICAGO, ILL.

**SECOND-HAND MACHINERY.**1 Iron Planer, planes 22 feet, 48x42, double heads.  
1 " " " 13 feet long, 39x36 in.  
1 " " " 7 " " 31x31 in.  
1 " " " 7 " " 30x26.  
1 " " " 4 " " 20x16.

and other sizes also.

1 Engine Lathes, 16 feet bed, 23 inch swing.

1 " " " 11 " " 19 " "

1 " " " 8 " " 15 " "

and various other sizes.

1 20 inch Plain Drilling Machine.

1 25 " " " " " "

1 9 in. Hewes &amp; Phillips Shaping Machine.

1 No. 3 Brown &amp; Sharp Screw Machine.

1 6 1/2 in. Slotted, automatic feed.

1 No. 3 1/2 Stiles &amp; Parker Press.

1 No. 5 " " " " " "

1 No. 2 P. &amp; W. press. 1 Arch Press for forming.

Send for list second-hand tools.

**NEW YORK MACHINERY DEPOT,**

Brooklyn Bridge Store, 16, New York.

**BARAINS.**

Second Hand Machinery, Good Condition.

**L. F. SEYFERT.**

437, 439 and 441 N. Third Street, Philadelphia, Pa.

1 100 h.p. Horizontal Engine, cyl. 18"x24".

1 80 h.p. Horizontal Engine Cylinder, 14"x30".

1 100 h.p. Stokes &amp; Parrish Elevator Engine.

1 100 h.p. Erie City Portable Engine and Boiler.

1 Worthington Dup. Steam Pump, cap. 175 gal. 8 min.

1 13 h.p. Agricultural Engine and Boiler on wheels.

20 Engines, 4 to 30 h.p., Hor. and Ver., best makes.

1 20 h.p. Copeland &amp; Bacon Hoisting Engine.

3 Portable Hoisting Engines, 6 to 15 h.p.

1 6 h.p. Frick Portable Engine and Boiler.

Rumblers, Foundry Lathes, Jacket Kettles, etc.

2 25 h.p. R. T. Boilers, 41"x10" (25) 3" tubes.

1 18 h.p. R. T. Boiler, 35"x29", 26 3/4" tubes.

1 35 h.p. Locomotive Boiler (50), 3" tubes.

20 Upright Steel Tubular Boilers, new, 4-27 h.p.; cheap.

1 50" Fitzburg Boring Lathe with chuck.

1 50"x14" Phillips Engine Lathes.

1 50"x16" Bishop Lathes, compound rest.

30 Screw-cutting and Speed Lathes, 10-20 swing 24-30.

1 Bishop Planer, 31"x24"x7 1/2", 318"x18"x3".

1 Lodge, Davis &amp; Co. 21" Drill Presses.

13 Drill Presses, from 10" to 25" swing, best makes.

1 Houston 4-sided 4" Horizontal Moulder.

1 24" Schenck Planer, Moulder and Matcher.

6 24 Goodell &amp; Waters Double Surfacter, endless bed.

5 Pony Planers and Surfacters, all sizes.

6 Mule Saws, complete. 1 Upright Moulders.

Eastern Agency "Kearney Woodes Sp. Pulley."

Shafting, Pulleys, Hangers, Couplings, Belting, etc.

Also full line of new machinery. Estimates furnished on application for Steam Plants and Mill Outfits.

**PLEASE WRITE FOR PRICES.****Second-hand Machinery in Good Order****FOR SALE CHEAP.**

1 Engine Lathes—36 in. x 20 ft.; 60 in. x 17 ft.; 48 in. x 15 ft.; 36 in. x 12 ft.; 24 in. x 10 ft.; 18 in. x 8 ft.; 12 in. x 6 ft.; 10 in. x 5 ft.; 8 in. x 4 ft.; 6 in. x 3 ft.; 4 in. x 2 ft.; 3 in. x 1 ft.; 2 in. x 1 ft.; 1 in. x 1 ft.; 1/2 in. x 1 ft.; 1/4 in. x 1 ft.; 1/8 in. x 1 ft.; 1/16 in. x 1 ft.; 1/32 in. x 1 ft.; 1/64 in. x 1 ft.; 1/128 in. x 1 ft.; 1/256 in. x 1 ft.; 1/512 in. x 1 ft.; 1/1024 in. x 1 ft.; 1/2048 in. x 1 ft.; 1/4096 in. x 1 ft.; 1/8192 in. x 1 ft.; 1/16384 in. x 1 ft.; 1/32768 in. x 1 ft.; 1/65536 in. x 1 ft.; 1/131072 in. x 1 ft.; 1/262144 in. x 1 ft.; 1/524288 in. x 1 ft.; 1/1048576 in. x 1 ft.; 1/2097152 in. x 1 ft.; 1/4194304 in. x 1 ft.; 1/8388608 in. x 1 ft.; 1/16777216 in. x 1 ft.; 1/33554432 in. x 1 ft.; 1/67108864 in. x 1 ft.; 1/134217728 in. x 1 ft.; 1/268435456 in. x 1 ft.; 1/536870912 in. x 1 ft.; 1/1073741824 in. x 1 ft.; 1/2147483648 in. x 1 ft.; 1/4294967296 in. x 1 ft.; 1/8589934592 in. x 1 ft.; 1/17179869184 in. x 1 ft.; 1/34359738368 in. x 1 ft.; 1/68719476736 in. x 1 ft.; 1/137438953472 in. x 1 ft.; 1/274877906944 in. x 1 ft.; 1/549755813888 in. x 1 ft.; 1/1099511627776 in. x 1 ft.; 1/2199023255552 in. x 1 ft.; 1/4398046511104 in. x 1 ft.; 1/8796093022208 in. x 1 ft.; 1/17592186044416 in. x 1 ft.; 1/35184372088832 in. x 1 ft.; 1/70368744177664 in. x 1 ft.; 1/140737488355328 in. x 1 ft.; 1/281474976710656 in. x 1 ft.; 1/562949953421312 in. x 1 ft.; 1/1125899906842624 in. x 1 ft.; 1/2251799813685248 in. x 1 ft.; 1/4503599627370496 in. x 1 ft.; 1/9007199254740992 in. x 1 ft.; 1/18014398509481984 in. x 1 ft.; 1/36028797018963968 in. x 1 ft.; 1/72057594037927936 in. x 1 ft.; 1/144115188075855872 in. x 1 ft.; 1/288230376151711744 in. x 1 ft.; 1/576460752303423488 in. x 1 ft.; 1/1152921504606846976 in. x 1 ft.; 1/2305843009213693952 in. x 1 ft.; 1/4611686018427387904 in. x 1 ft.; 1/9223372036854775808 in. x 1 ft.; 1/18446744073709551616 in. x 1 ft.; 1/36893488147419103232 in. x 1 ft.; 1/73786976294838206464 in. x 1 ft.; 1/147573952589676412928 in. x 1 ft.; 1/295147905179352825856 in. x 1 ft.; 1/590295810358705651712 in. x 1 ft.; 1/1180591620717411303424 in. x 1 ft.; 1/2361183241434822606848 in. x 1 ft.; 1/4722366482869645213696 in. x 1 ft.; 1/9444732965739290427392 in. x 1 ft.; 1/18889465931478580854784 in. x 1 ft.; 1/37778931862957161709568 in. x 1 ft.; 1/75557863725914323419136 in. x 1 ft.; 1/151115727451828646838272 in. x 1 ft.; 1/302231454903657293676544 in. x 1 ft.; 1/604462909807314587353088 in. x 1 ft.; 1/1208925819614629174706176 in. x 1 ft.; 1/2417851639229258349412352 in. x 1 ft.; 1/4835703278458516698824704 in. x 1 ft.; 1/9671406556917033397649408 in. x 1 ft.; 1/19342813113834066795298816 in. x 1 ft.; 1/38685626227668133590597632 in. x 1 ft.; 1/77371252455336267181195264 in. x 1 ft.; 1/154742504910672534362390528 in. x 1 ft.; 1/309485009821345068724781056 in. x 1 ft.; 1/618970019642690137449562112 in. x 1 ft.; 1/1237940039285380274899124224 in. x 1 ft.; 1/2475880078570760549798248448 in. x 1 ft.; 1/4951760157141521099596496896 in. x 1 ft.; 1/9903520314283042199192993792 in. x 1 ft.; 1/19807040628566084398385987584 in. x 1 ft.; 1/39614081257132168796771975168 in. x 1 ft.; 1/79228162514264337593543950336 in. x 1 ft.; 1/158456325028528675187087900672 in. x 1 ft.; 1/316912650057057350374175801344 in. x 1 ft.; 1/633825300114114700748351602688 in. x 1 ft.; 1/1267650600228229401496703205376 in. x 1 ft.; 1/2535301200456458802993406410752 in. x 1 ft.; 1/5070602400912917605986812821504 in. x 1 ft.; 1/10141204801825835211973625643008 in. x 1 ft.; 1/20282409603651670423947251286016 in. x 1 ft.; 1/40564819207303340847894502572032 in. x 1 ft.; 1/81129638414606681695789005144064 in. x 1 ft.; 1/162259276829213363391578010288128 in. x 1 ft.; 1/324518553658426726783156020576256 in. x 1 ft.; 1/649037107316853453566312041152512 in. x 1 ft.; 1/1298074214633706907132624082305024 in. x 1 ft.; 1/2596148429267413814265248164610048 in. x 1 ft.; 1/5192296858534827628530496329220096 in. x 1 ft.; 1/10384593717069655257060992658440192 in. x 1 ft.; 1/20769187434139310514121985316880384 in. x 1 ft.; 1/41538374868278621028243970633760768 in. x 1 ft.; 1/83076749736557242056487941267521536 in. x 1 ft.; 1/166153499473114484112975882535043072 in. x 1 ft.; 1/332306998946228968225951765070086144 in. x 1 ft.; 1/664613997892457936451903530140172288 in. x 1 ft.; 1/1329227995784915872903807060280344576 in. x 1 ft.; 1/2658455991569831745807614120560689152 in. x 1 ft.; 1/5316911983139663491615228241121378304 in. x 1 ft.; 1/10633823966279326983230456482242756608 in. x 1 ft.; 1/21267647932558653966460912964485513216 in. x 1 ft.; 1/42535295865117307932921825928971026432 in. x 1 ft.; 1/85070591730234615865843651857942052864 in. x 1 ft.; 1/170141183460469231731687303715884105728 in. x 1 ft.; 1/340282366920938463463374607431768211456 in. x 1 ft.; 1/680564733841876926926749214863536422912 in. x 1 ft.; 1/1361129467683753853853498429727072845824 in. x 1 ft.; 1/2722258935367507707706996859454145691648 in. x 1 ft.; 1/5444517870735015415413993718908291383296 in. x 1 ft.; 1/10889035741470030830827987437816582766592 in. x 1 ft.; 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1/100433627766186892221372630771322662657637687111424552206336 in. x 1 ft.; 1/200867255532373784442745261542645325315275374222849104412672 in. x 1 ft.; 1/401734511064747568885490523085290650630550748445698208825344 in. x 1 ft.; 1/803469022129495137770981046170581301261101496891396417650688 in. x 1 ft.; 1/1606938044258990275541962092341162602522202993782792835301376 in. x 1 ft.; 1/3213876088517980551083924184682325205044405987565585670602752 in. x 1 ft.; 1/6427752177035961102167848369364650410088811975131171341205504 in. x 1 ft.; 1/12855504354071922204335696738729300820177623950262342682411008 in. x 1 ft.; 1/25711008708143844408671393477458601640355247900524685364822016 in. x 1 ft.; 1/51422017416287688817342786954917203280710495801049370729644032 in. x 1 ft.; 1/102844034832575377634685573909834406561420991602098741459288064 in. x 1 ft.; 1/205688069665150755269371147819668813122841983204197482918576128 in. x 1 ft.; 1/411376139330301510538742295639337626245683966408394965837152256 in. x 1 ft.; 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## Eastern Lumber Markets.

[Spec. correspond. MANUFACTURERS' RECORD.]

NEW YORK, December 3, 1889.

Southern lumber is going into retailers and builders' hands with almost as much activity as during midsummer. People who buy lumber in this market are more fearful than even a month ago that prices may boom up on them; hence they are looking after their stocks.

As the canals are closing or closed, rail shipments are increasing, and the best informed say there will be a very large rail trade in lumber this winter.

The World's Fair scheme occupies a great deal of attention. The \$5,000,000 guarantee fund has been raised after a hard effort, but meanwhile Chicago is nearing her \$10,000,000 limit. Of course, all lumber interests hereabouts are hopeful that Congress will decide on New York as the location, because of its effects on general business, and upon the lumber trade especially. No matter which way it goes, Southern lumber will profit by the fair. It will be a tremendous affair.

The rush of yellow pine into our market continues, and it all goes as fast as it arrives. There is very little shading of prices, and no cutting of rates. We have large orders for special widths, lengths and dimensions, for which we are now waiting. From our correspondence we learn that the Southern mills are nearly all crowded with orders, and that prices are in more danger of going upwards than downwards.

North Carolina pine is also wanted, as usual, as fast as it can be delivered, and in the main prices are good.

The hardwood trade is also in excellent condition, and prices are even looking upward. To begin with, poplar has once more asserted itself, and now full prices are asked and paid. Send on your poplar; there are buyers for it all. Of course it is possible to break the market, but as things stand there is no great danger of it.

Then as to ash; there is a good, steady sale, but it is not supported by a powerful association, as poplar is, and hence weakness crops out now and then. The ash manufacturers who do not need to sell to meet obligations have been holding good ash a dollar or two above the market; that is, buyers are not willing to pay prices asked by some few strong holders. Ash is in better shape than it has been for months.

Good wide quartered oak is selling at \$50. Good quartered sycamore is scarce. There is a call for cottonwood and gum in new channels.

There is a growing interest manifested by Northern lumber manufacturers and dealers in Southern mills, and several large operators will spend some time in the South this winter to establish some relations for future supplies under their guidance.

Business is quite active at Buffalo. Cars are scarce at Williamsport, and all the streams in the interior of the State are swollen. Hemlock boards are rather scarce. The export trade here is good.

Business is in good shape and all branches are doing their full share. Money inclines to stringency. We all hope Congress will not upset business calculations.

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BALTIMORE AND WASHINGTON.

## "See Us," page 44

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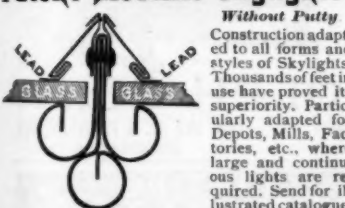
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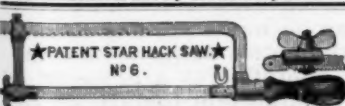
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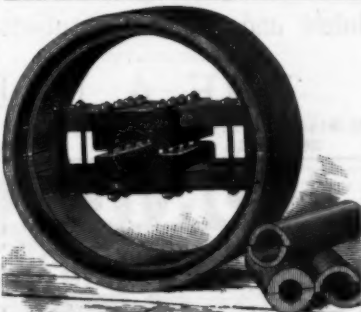


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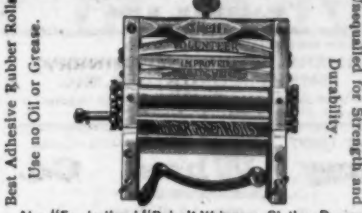
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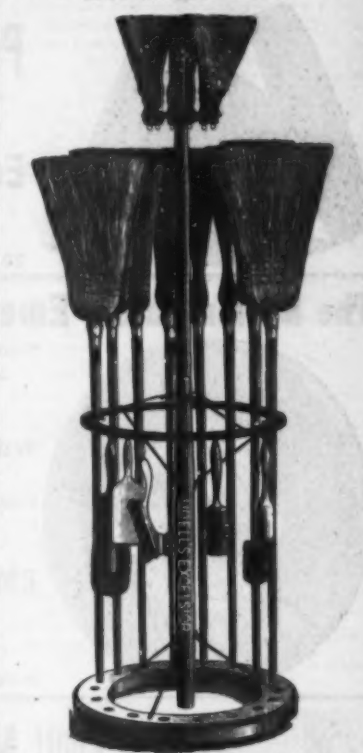
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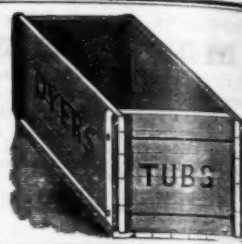
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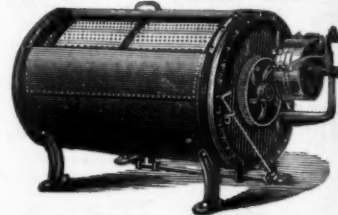
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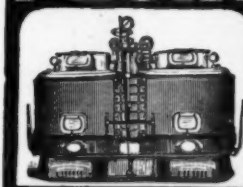
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[FOR "ALPHABETICAL INDEX" WITH PAGES, SEE PAGE 42.]

- Air Compressors.**  
Ingersoll-Sergeant Rock Drill Co.  
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**Anti-Friction Metal.**  
Magnolia Anti-Friction Metal Co.  
**Asbestos.**  
Chalmers-Spence Co.  
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Frederic Taylor & Co.  
P. J. Goodhart & Co.  
Winner Investment Co.  
American Develop. Co.  
**Barrel Machinery.**  
(See Wood-Working Machinery.)  
E. & B. Holmes.  
**Bath Tubs.**  
Haines, Jones & Cadbury Co.  
**Bearings.**  
North American Metal-ine Co.  
**Bells.**  
Henry McShane & Co.  
**Belting.**  
Akron Belting Co.  
Chesapeake Belting Co.  
Chicago Raw Hide Mfg. Co.  
Gandy Belting Co.  
N. Y. Belt & Pack. Co.  
Page Belting Co.  
Shultz Belting Co.  
**Belting (Chain).**  
Jeffrey Mfg. Co.  
Link Belt Engineer's Co.  
R. Swormstedt & Co.  
**Belt Holders.**  
W. R. Santley & Co.  
**Blacksmiths' Tools.**  
Buffalo Forge Co.  
Fulton Iron & En. Wks.  
**Blowers and Exhaust Fans.**  
Buffalo Forge Co.  
B. F. Sturtevant.  
Geo. F. Clark.  
**Boat Builders.**  
(Steam.)  
Atlantic Works.  
Chas. P. Willard & Co.  
**Boilers.**  
(See also Machinery.)  
Abendroth & Root Mfg. Co.  
Atlantic Works.  
Casey Boiler Mfg. Co.  
Babcock & Wilcox Co.  
Frack Co.  
I. T. Foley & Co.  
Harrison Stry. B'l'r. Wks.  
R. Munroe & Son.  
Rochester Machine Tool Wks.  
Skinner Engine Co.  
Geo. W. Tift, Sons & Co.  
Cleveland & Hardwick  
Lowell Stn. Boiler Wks.  
Campbell & Zell Co.  
Taylor Mfg. Co.  
Webster, Camp & Lane  
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Stilwell & Bierce Mfg. Co.  
Mason Regulator Co.  
Chalmers-Spence Co.  
Hoppers Mfg. Co.  
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Chalmers-Spence Co.  
**Boiler Makers' Supplies.**  
New Doty Mfg. Co.  
Hetherington & Nason.  
**Boiler Setting.**  
Jarvis Engineering Co.  
**Bolts and Rivets.**  
Hoopes & Townsend.  
**Brick & Clay Work-  
ing Machinery &  
Supplies.**  
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Chambers Bros. Co.  
Fletcher & Thomas.  
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chine Mfg. Co.  
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Mfg. Co.  
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en Mfg. Co.  
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Niagara Stamping &  
Tool Co.  
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- Card Clothing.**  
(See Textile Machinery  
and Supplies.)  
**Cars.**  
(See R. R. Equipment  
and Supplies.)  
**Castings.**  
Jno. N. Marquette.  
Todd Pulley & Shafting  
Wks.  
Adams & Price Locomo-  
tive & Machine Wks.  
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Knoxville Car Whl. Co.  
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A. Whitney & Sons.  
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Co.  
**Car Works Equip-  
ment.**  
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neers and Ma-  
chinists.**  
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Van Winkle Gin & Ma-  
chinery Co.  
**Cotton Gin Lubri-  
cator.**  
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**Cotton Seed Oil  
Machinery.**  
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Van Winkle Gin & Ma-  
chinery Co.  
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and Cob).**  
Rich'm'd City Mill Wks.  
Walton & Sprout.  
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Stone, &c.).**  
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Wiswell Electric Min-  
ing Machinery Co.  
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tric Co.  
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Southern Electrical Sup-  
ply Co.  
Westrom So. Electric  
Mfg. Co.  
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and Motors.**  
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tric Co.  
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Daft Electric Light Co.  
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neers.**  
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plies.**  
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ply Co.  
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Elevator Works.  
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(See Grinding and Pol-  
ishing Machinery.)  
**Engines.**  
(See also Machinery.)  
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Buckeye Engine Co.  
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Castle Engine Works.  
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sene).**  
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(See Real Estate.)  
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Birdsall Co.  
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Machinery Co.  
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Warfield Mfg. Co.  
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Wks.  
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Lowell Stm. Boiler Wks.  
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ing & Stone-Cut-  
ting Mehry.**  
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- Paint.**  
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chinery.**  
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forating Co.  
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Phosph. Bron. Smelt. Co.  
**Pig Iron.**  
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D. Saunders' Sons.  
Billings & Spencer Co.  
**Pipe Fittings.**  
Pancoast & Maule.  
**Plantation  
Engines.**  
The Birdsall Co.  
**Plumbers' Sup-  
plies & Tools.**  
Milner & Kettig.  
Haines, Jones & Cad-  
bury Co.  
Pancoast & Maule.  
Hetherington & Nason.  
D. Saunders' Sons.  
**Pulleys, Shafting  
and Hangers.**  
Thos. K. Carey & Bros.  
Milburn Gin & Mch. Co.  
Warfield Mfg. Co.  
Lane & Bodley Co.  
Taper-Sleeve Pul. Wks.  
James Smith & Co.  
Eclipse Wind Engine  
Co.  
P. Frybill.  
R. Swormstedt.  
Hill Clutch Works.  
Todd Pul. & Shaft. Wks.  
Jno. N. Marquette.  
Chat. W'd Split Pul. Co.  
Webster, Camp & Lane  
Machine Co.  
**Pulley Covering.**  
Nat. Pul'y Covering Co.  
**Punching and  
Shearing Mehry.**  
New Doty Mfg. Co.  
Long & Allattatter Co.  
**Quarrying Mach'y**  
(See Mining Machinery.)  
**Railroads.**  
Piedmont Air Line  
Western Md. R. R.  
Wheeling & Lk. Er. Ry.  
Cin. Ham. & Dayton Rd.  
Queen & Cres't Route.  
E. Ten., Vir. & Georgia  
Erie Railway.  
**Railroad Equip'm't  
and Supplies.**  
(New & Sec'd Hand)  
Thos. K. Carey & Bros.  
Dyott & Co.  
Robinson & Orr.  
H. A. Rogers.  
Humphreys & Sayce.  
V. Equipment Co.  
Carriage Mfg. Co.  
Richmond Loc. & Mch.  
Wks.  
H. K. Porter & Co.  
The Jno. Stephenson Co.  
(Limited).  
Penna. Steel Co.  
Burlington Locomo. Wks.  
Hetherington & Nason.  
Palmer, Cunningham &  
Co.  
Wm. Minnigerode.  
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F. A. Estep.  
Lowe & Tucker.  
Russell Wheel & Foundry  
Co.  
Reginald Canning & Co.  
A. S. Males & Co.  
O. W. Child & Co.  
**Real Estate.**  
(See also Towns.)  
Barclay & Crockett.  
Mineral and Tim. Land  
Co. of the South.  
Mannson & Bro.  
Darlington Land & Im-  
provement Co.  
J. H. Wiley.  
Waterloo Land Mining  
& Mfg. Co.  
**Road Rollers.**  
Foundry & Mch. Depart.  
of Harris'g Car Mfg. Co.  
**Roofing.**  
Cincin. Corrugating Co.  
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Corrugating Co.  
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Cambridge Roofing Co.
- The Berger Mfg. Co.**  
Lowe & Tucker.  
Druid Felt Co.  
Merchant & Co.  
**Rubber Goods.**  
N. Y. Belt'g & Pack. Co.  
Waterbury Rubber Co.  
**Rustless Iron.**  
Wells Rustless Iron Co.  
**Saws.**  
(See also Woodworking  
Machinery.)  
Frank W. Sweet.  
Chattanooga Saw Wks.  
W. B. Barry Saw and  
Supply Co.  
Henry Disston & Sons.  
The Detroit Saw Wks.  
**Saw Gummer.**  
N. Y. Belt'g & Pack. Co.  
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Gummer.**  
Sam'l. C. Rogers & Co.  
**Saw Mill Machin'y**  
Frack Co.  
De Loach Mill Mfg. Co.  
Richmond Mch. Wks.  
A. C. Powell & Son.  
Taylor Mfg. Co.  
**Scales.**  
Rieble Bros.  
Standard Scale Co.  
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H. L. Beach.  
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Hetherington & Nason.  
**Sheet Metal Work-  
ing Machinery.**  
E. W. Bliss Co.  
Niagara Stamping and  
Tool Co.  
Stiles & Parker Press Co.  
**Shingle and Stave  
Machinery.**  
(See Woodworking Ma-  
chinery.)  
**Skylights.**  
E. Van Noorden & Co.  
Vaile & Young.  
**Spikes.**  
Richmond Standard  
Spoke Co.  
**Steamers.**  
Bay Line Steamers.  
Balto. Stor. & Light Co.  
**Steam Hammers.**  
Long & Allattatter Co.  
Belden Machine Co.  
Bradley & Co.  
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Machine Co.  
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Deane S. P. Co.  
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Gordon Steam Pump Co.  
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Mfg. Co.  
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The Stratton Separ. Co.  
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Chester Steel Cast'g Co.  
Thos. Devlin & Co.  
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(See also R. R. Equip'm't  
and Supplies.)  
Penna. Steel Co.  
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Thos. Devlin & Co.  
Fulton Iron & Eng. Wks.  
**Tanks and Vats.**  
Amos H. Hall.  
**Testing Machines.**  
Standard Scale Co.  
Rieble Bros.  
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and Supplies.**  
John M. Pevey.  
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American Supply Co.  
T. K. Earle Mfg. Co.  
Fall River Spool and  
Bobbin Co.  
Crompton Loom Wks.  
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Sons.  
Globe Machine Wks.  
W. A. Richardson & Co.  
Whitinsville Spinning  
Ring Co.  
The Green & Wood  
Mfg. Co.  
Jeremiah Clark.  
Fettes Machine Wks.  
Easton & Barnham.  
Chas. Heap.  
J. A. V. Smith.  
Eastwood & Co.
- Textile Machinery  
(Second Hand).**  
Jeremiah Clark.  
L. Godfrey & Co.  
**Tools (Machine &  
Hand).**  
Cleveland Tw. Drill Co.  
Sigourney Tool Co.  
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Lathe & Morse Tool Co.  
E. Harrington, Son & Co.  
Lodge & Davis Machine  
Tool Co.  
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Prentiss Tl. & Sup. Co.  
Fulton Iron & En. Wks.  
Palmer, Cunningham &  
Co.  
Ely & Deming.  
E. C. Stearns & Co.  
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Niles Tool Works.  
W. F. & Jno. Barnes Co.  
H. L. Shepard.  
Pancoast & Maule.  
Standard Tool Co.  
Bridgeport Gun Imp. Co.  
**Towns.**  
Sumter, S. C.  
New Bern, N. C.  
Charlottesville, Va.  
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New Decatur, Ala.  
Sheffield, Ala.  
Morgantown, Tenn.  
Fort Payne, Ala.  
Denison, Tex.  
Bluffton, Ala.  
Bessemer, Ala.  
Wilmington, N. C.  
Liberty, Va.  
Oxford, N. C.  
Middlesborough, Ky.  
Huntington, Ark.  
Camden, S. C.  
Salem, Va.  
**Trucks.**  
Standard Scale Co.  
**Turnbuckles.**  
Ely & Deming.  
Cleveland City Forge &  
Iron Co.  
**Valves.**  
Jenkins Bros.  
Ludlow Valve Mfg. Co.  
The Wm. Powell Co.  
**Vener Cutting  
Machines.**  
(See Woodworking Ma-  
chinery.)  
**Ventilators.**  
E. Van Noorden & Co.  
**Water Closet.**  
Haines, Jones & Cad-  
bury Co.  
**Water Wheels.**  
Rodney Hunt Mch. Co.  
Rome Fy. & Mch. Wks.  
Stillwell & Bierce Mfg. Co.  
Lancaster Turbine  
Wheel Co.  
S. Morgan Smith.  
Stout, Mills & Temple.  
**Well Tools.**  
St. Louis Vise & Arte-  
sian Well Co.  
F. C. Austin Mfg. Co.  
**Well Points.**  
R. R. Rouse.  
**Wheelbarrows.**  
Kilbourn & Jacobs Mfg.  
Co.  
Stuebner & Woods.  
**Wire, Wire Rope,  
Barbed Wire, &c.**  
Washburn & Moen Mfg.  
Co.  
Williamap'g W. Rope Co.  
Ludlow Saylor Wire Co.  
Nelsonville Foundry &  
Machine Co.  
**Wire Goods.**  
Fred J. Meyers Mfg. Co.  
Dufur & Co.  
Ludlow Saylor Wire Co.  
Sedgwick Bros.  
**Woodenware Spe-  
cialties.**  
Udell Woodmen. Wks.  
**Wood Water Pipe.**  
A. Wyckoff & Son.  
**Wood-Working  
Machinery.**  
J. A. Fay & Co.  
H. B. Smith Mch. Co.  
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Cordesman, Meyer & Co.  
Rowley & Hermance.  
J. S. Graham & Co.  
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Glen Cove Machine Co.  
S. C. Forsaith Mch. Co.  
Trevor & Co.  
D. S. Abbott.  
Sebastian, May & Co.  
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Du Quoin Iron Works.  
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Lehman-Evans Mch. Co.  
Josiah Rose.  
Globe Machine Co.  
Preble Mch. Wks. Co.  
Dirigo Eng. & Mch. Co.  
**Wrenches.**  
Billings & Spencer Co.



# Alphabetical Index of Advertisers.

[For "CLASSIFIED INDEX," SEE PAGE 41.]

<b>A</b>		<b>J</b>	
Abbott, D. S.	38	Jarvis Engineering Co.	59
Abendroth & Root Mfg. Co.	8	Jeffrey Mfg. Co.	52, 53
Adams, S., & Sons	8	Jenkins Bros.	59
Addyston Pipe & Steel Co.	67	Johnson, R. M.	52
Aerated Fuel Co.	65	Johnson, Shryock & Co.	38
Aitchison, Robt., Perf. Metal Co.	53	Joyce, Cridland & Co.	38
Akron Belting Co.	10	<b>K</b>	
Allen, Edw.	39	Kaestner & Co., Chas.	57
Alexander, J. H.	35	Kanneberg Roofing Co.	61
American Development Co.	29	Kilbourne & Jacobs Mfg. Co.	68
"American Economist"	62	Knoxville Car Wheel Co.	59
American Machine Co.	60	Kroeschells & Bourgeois.	52
American Supply Co.	39	<b>L</b>	
Andress, Thomas J.	39	Ladd, Alfred W.	37
Arctic Ice Machine Mfg. Co.	57	Laidlaw & Dunn Co.	66
Arnold, D. J. C.	57	Lancaster Turbine Wheel Co.	53
Atchison, Topeka & Santa Fe R. Co.	26	Landis, Ezra F.	36
Atlantic Works.	64	Lathe & Morse Tool Co.	31
Ault & Wiborg.	66	Lehman-Evans Machine Co.	58
Austin, F. C., Mfg. Co.	66	Liberty, Va.	17
Automatic Time Stamp Co.	39	Ligovsky Clay Pigeon Co.	39
<b>B</b>		Lincoln Iron Works.	39
Babcock & Wilcox Co.	59	Link Belt Engineering Co.	56
Baldwin Locomotive Works.	50	Lockwood, Greene & Co.	33
Ball Engine Co.	50	Lodge-Davis Mach. Tool Co.	33
Baltimore Stor. & Light. Co.	62	Long & Allstatter Co.	56
Barclay & Crockett.	38	Louisville Mch. & Elv. Wks.	45
Barnes, W. F. & John, Co.	55	Lowe & Tucker.	61
Barry, W. B., Saw & Supply Co.	68	Lowell Steam Boiler Works.	37
Bates, Jas.	58	Ludlow Saylor Wire Co.	50
Bay Line.	33	Ludlow Valve Mfg. Co.	64
Beach, H. L.	33	<b>M</b>	
Beckett Foundry & Machine Co.	58	Magnolia Anti-Friction Metal Co.	43
Belden Machine Co.	52	Makepeace, C. R. & Co.	33
Bentel & Margendant Co., The.	3	Males, A. S., & Co.	37
Berger Mfg. Co.	61	Marquette, John N.	47
Bessemer, Ala.	47	Martin, Henry, Brick Mch. Mfg. Co.	59
Bickford Drill Co.	52	Maslin, Jno. & Son.	55
Billings & Spencer Co.	9	Mason Regulator Co.	53
Birdsall Co.	58	McGowan, The.	66
Blake Mfg. Co., The Geo. F.	66	McLanahan & Stone.	42
Blakeslee Mfg. Co.	66	McNeill, G. C.	49
Bliss, E. W., Co.	56	McShane, H., & Co.	62
Bluffton, Ala.	18	Merchant & Co.	52
Boggs & Clarke.	3	Merchants & Farmers' Bank.	29
Bone, Hugh.	35	Merry, C. H.	55
"Boom"	36	Meyers, Fred, J., Mfg. Co.	60
Boomer & Boschert Press Co., The.	33	Middleborough, Ky.	24
Box 110.	2	Milburn Gin & Machine Co.	1
Boyle, David.	2	Miller & Bierce.	64
Bradley & Co.	51	Millers Falls Co.	39
Bradstreet Co.	62	Miller & Kettig.	40
Bray & Nickerson Auto. Gage	52	Mineral & Timber Land Co.	38
Glass Co.	52	Minnierode, Wm.	37
Bridgeport Gun Imp. Co.	7	Moon, J. L.	48
Brown, Alex., & Sons.	29	Moore & White Co., The.	45
Brush Electric Co.	3	Morris Machine Works.	53
Buckeye Engine Co.	61	Morrison, Robert.	21
Bucyrus Fdry. & Mfg. Co.	3	Morrison, Tenn.	21
Budden & Son.	40	Morse, Williams & Co.	1
Buffalo Forge Co.	68	Munroe, R. & Son.	42
Buffalo Steam Pump Co.	66	Munson Bros.	1
Bullock, M. C., Mfg. Co.	45	Munson & Bro.	36
Buntin, W. H.	25	Murray, Jas., & Son.	45
Butterworth, H. W. & Sons.	9	<b>N</b>	
<b>C</b>		National Pulley Covering Co.	55
Caldwell, H. W.	3	Nelsonville Fdy. & Machine Co.	48
Cambridge Roofing Co.	61	New Berne, N. C.	37
Camden, S. C.	36	New Decatur, Ala.	46
Cameron, A. S., Steam Pump Wks.	67	New Doty Mfg. Co.	68
Campbell & Zell Co.	33	New York Belting & Packing Co.	37
Canning, Reginald & Co.	37	New York Equipment Co.	37
Canton Steel Roofing Co.	61	New York Machinery Depot.	37
Carey, Thos. K., & Bros.	1	"Niagara" Hotel.	59
Carlisle Mfg. Co.	42	Niagara Stamping & Tool Co.	56
Carter, Jno. S.	52	Nicholson File Co.	68
Case Mfg. Co.	53	Niles Tool Works.	51
Casey Boiler Mfg. Co.	36	Nordyke & Marmon Co.	10
Castle Engine Works.	3	North American Metaline Co.	53
Catlett, Chas.	42	Northampton Emery Wheel Co.	40
Chalmers-Spence Co.	3	Norton Emery Wheel Co.	40
Chambers Brothers Co.	57	Noye, John T. Mfg. Co.	58
Chandler & Taylor.	58	<b>O</b>	
Charlottesville, Va.	22	Obermayer, S., Fdy. Sup. Mfg. Co.	55
Chattanooga Fdry. & Pipe Wks.	67	O'Dowell, Jno. J.	35
Chattanooga Saw Works.	67	Okonite Co.	3
Chattanooga Paint Co.	40	Otto Gas Engine Works.	10
Chattanooga Wood Split Pulley Co.	39	Oxford, N. C.	22
Chesapeake Belting Co.	54	<b>P</b>	
Chester Steel Castings Co.	51	Page Belting Co.	3
Chicago Rawhide Mfg. Co.	54	Palmer, Cunningham & Co. (Lim.)	51
Child, O. W., & Co.	37	Palmer, C., Mfg. Co.	36
Cincinnati Corrugating Co.	61	Pancost & Maule.	67
Clark, Geo. P.	39	Payne, B. W. & Sons.	39
Clark, Jeremiah.	39	Pennsylvania Steel Co.	50
Cleveland & Hardwick.	59	Peregrine & Co., W. Edwin.	38
Cleveland City Forge & Iron Co.	10	Pettee Machine Works.	9
Cleveland Twist Drill Co.	7	Pevey, Jno. M.	9
Coe & Wilkes.	5	Phenix Iron Foundry.	65
Colliu, Victor.	53	Phila. Warehouse Co.	54
Cole, W. H.	33	Phenix Iron Works.	54
Commonwealth Construction Co.	64	Phosphor-Bronze Smlt. Co. (Lim.)	51
Consolidated Ice Machine Co.	45	Piedmont Air Line.	62
Contractors' Plant Mfg. Co.	48	Pierce, Butler & Pierce Mfg. Co.	40
Copeland & Bacon.	48	Place, George.	37
Cordesman, Meyer & Co.	7	Porter, H. K., & Co.	50
Covert Mfg. Co.	60	Powell, A. C., & Son.	8
Crompton Loom Works.	9	Powell, Chas. S.	35
<b>D</b>		Powell, Wm. Co.	52
Cronk Hanger Co.	60	Pratt, J. H.	36
Curtis Regulator Co.	57	Preble Machine Works Co.	37
<b>E</b>		Prentiss Tool & Supply Co.	37
Daft Electric Light Co.	63	Prescott, F. W. & Co.	29
Danner, A. C.	63	Prybitt, P.	3
Davidson Steam Pump Co.	38	Pulsometer Steam Pump Co.	66
Dean Bros. Steam Pump Works.	66	<b>R</b>	
Deane Steam Pump Co.	10	Racine Hardware Mfg. Co.	38
Defiance Machine Works.	7	Rand Drill Co.	43
Defiance Oil Fuel Burner & Forge Co.	65	Rarig & Co., Alex. K.	58
De Loach Mill Mfg. Co.	8	Raymond, C. W., & Co.	57
Denison, Texas.	30	Record Printing House.	57
Derby & Kilmer Desk Co.	39	Reliance Gauge Co.	57
Detrick & Harvey.	37	Richardson, W. A., & Co.	9
Detroit Saw Works, The.	7	Richmond City Mill Works.	56
Devlin & Co., Thos.	68	Richmond Locomotive & Machine Works.	56
Diamond Prospecting Co.	48	Richmond Machine Works.	2
Dirigo Engine & Machine Co.	3	Richmond Standard Spoke Co.	50
Disston, Henry, & Sons.	2	Rieble Bros.	63
Dixon, Jos., Crucible Co.	54	Rife's Hydraulic Eng. Mfg. Co.	66
Dolph, A. M., Co.	40	Ring Refrig. & Ice Machine Co.	53
Draper, Geo., & Sons.	10	Robinson, Wm. C., & Son.	61
Druid Felt Co.	61	Robinson & Orr.	1
Dufur & Co.	55	<b>S</b>	
Du Quoin Iron Works.	5	Salem, Va.	16
Dyott & Co.	50	Santley, W. R., & Co.	42
<b>F</b>		Saunders, D., Sons.	67
Eagle Iron Works.	52	Sawyer-Man Electric Co.	63
Earle, T. K., Mfg. Co.	55	Saxton, J. C.	37
Easton & Burnham.	3	Scovel & Irwin Construction Co.	38
Eastwood & Co.	9	Sebastian, May & Co.	51
Eclipse Wind Engine Co.	45	Sedgwick Bros.	55
Eddy, Chas. G.	36	Seyfert, L. F.	37
Egan Co., The.	5	Sheffield, Ala.	3
Electric Power Pub. Co.	63	Shepherd, H. L.	52
Ely & Deming.	55	Shields & Brown Co.	65
Empire Paint & Roofing Co.	39	Shimer, Samuel, J.	4
Empire Portable Forge Co.	39	Shryock, Thos. J., & Co.	58
Empire Wringer Co.	39	Shultz Belting Co.	54
Employers' Liability Assurance Corporation.	4, 49, 50	Sigourney Tool Co.	52
Estep, F. A.	37	Silver & Deming Mfg. Co.	64
Eureka Brick Mch. Mfg. Co.	3	Simpkin & Hillyer.	64
Evans Friction Cone Co.	45	Skinner Engine Co.	58
Evans, G. W., Pres.	35	Smith, C. G.	35
<b>G</b>		Smith, H. B., Machine Co.	4
Gambrill, C. A., Mfg. Co.	62	Smith, J. A. V.	1
Gandy Belting Co.	54	Smith, Jas., & Co.	55
Garvin Machine Co.	68	Smith, R. C.	35
Gates Iron Works.	3	Smith, S. M.	35
Glamorgan Co., The.	67	Smith, S. Morgau.	60
Glen Cove Machine Co., (Lim.)	67	Smith & Vaile Co.	60
Globe Iron Roof & Corrugat. Co.	61	So. Electrical Supply Co.	3
Globe Machine Co.	9	Southern Equipment Co.	35
Globe Machine Works.	9	So. Fla. Foundry & Machine Co.	36
Goodell & Waters.	37	Southwest Foundry & Mach. Co.	36
Gordon Steam Pump Co.	53	Springfield Emery Wheel Mfg. Co.	37
Gordon, Strobel & Laureau (Lim.)	54	Standard Dry Kiln Co.	38
Graham, J. S., & Co.	7	Standard Oil Fuel Burner Co.	65
Goodhart, P. J., & Co.	29	Standard Tool Co.	60
Greene & Wood Mfg. Co.	55	Starr, B. F. & Co.	68
Griffing Iron Co., A. A.	40	Steam Stone Cutter Co.	48
<b>H</b>		Stearns, E. C., & Co.	39
Haines, Jones & Cadbury Co.	40	Stedman's Fdry. & Mch. Wks.	49
Hall, Amos H.	62	Stephenson, John, Co. (Limited).	54
Haralson & Murray.	62	Stieff, Chas. M.	55
Harrington & King Perforat. Co.	49	Stiles & Parker Press Co.	56
Harris, A. W., Oil Co.	61	Stilwell & Bierce Mfg. Co.	65
Harris, Wm. A., Steam Eng. Co.	58	St. Louis Vise & Artesian Well Tool Co.	67
Harrison Safety Boiler Works.	3	Stokes & Parrish Machine Co.	66
Hartford Steam Boiler Inspection & Insurance Co.	61	Stout, Mills & Temple.	66
Hayden, Joel, & Co.	29	Stratton Separator Co.	59
Heap, Chas.	9	Stuebner & Woods.	55
Heisler Electric Light Co.	63	Sturtevant, B. F.	59
Hetherington & Nason.	33	Sumter, S. C.	5
Hill Clutch Works.	45	Swain, Edw. A.	62
Holmes, E. & B.	62	Swett, Frank W.	1
Holton Iron Roofing Co.	61	Sword, P. L., & Son.	57
Hoopes & Townsend.	51	Sword, P. L., & Son.	57
Hoppe Mfg. Co.	51	Syracuse Twist Drill Co.	3
Houston, Levi.	4	<b>T</b>	
Howcott, W. H.	38	Tarbell, Chas. F.	64
Hubbard & Co.	39	Taper-Sieve Pulley Works.	52
Hughes Steam Pump Co.	53	Taylor, Frederic, & Co.	29
Humphreys & Sayce.	53	Taylor Mfg. Co.	58
Hunting, E. B., & Co.	38	Taylor, Wm. & Sons.	3
Huntington, Ark.	36	Terrell Cotton & Woolen Mfg. Co.	63
Hunt, Rodney, Machine Co.	60	Thompson-Houston Electric Co.	63
Hyndman, W. G., & Co.	60	Tift, Geo. W., Sons & Co.	58
<b>I</b>		Todd Pulley & Shafting Works.	45
Illuminating & Fuel Gas Co.	61	Tompkins Co., D. A.	58
Indiana Machine Works.	3	Totten & Hogg I. & S. Fdry. Co.	8
"Industry"	36	Trevor & Co.	8
Ingersoll-Sergeant Rock Drill Co.	1	<b>U</b>	

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**MINING, TUNNELING,**  
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**RAND DRILL CO. 23 PARK PLACE, NEW YORK**

FOR OAK LEATHER  
**BELTING**  
At Short Notice.  
WRITE  
**THE AKRON BELTING CO.**  
AKRON, OHIO.

**WEST POINT BOILER WORKS**  
Boilers with  
and all  
kinds of  
Sheet Iron  
Work made  
to order.  
**R. Munroe & Son**  
23rd & Smallman Sts., Pittsburgh, Pa.

**VAN DUZEN**  
**GAS ENGINE**  
NO BOILER. NO COAL.  
NO ENGINEER.  
No Extra WATER RENT  
or INSURANCE.  
INSTANTLY STARTED.  
DURABLE, RELIABLE.  
SAFE AND ECONOMICAL.  
Send for description and prices.  
**Van Duzen Gas Engine Co.,**  
56 E. 2nd St., CINCINNATI, O.

**The WELLINGTON BELT HOLDER.**  
LATELY  
IMPROVED.  
Just the thing  
to shift large  
belts driving  
Dynamos, Blowers,  
Gins, Saws,  
Etc. Belt stops  
and slackens  
when machine  
stops. Thousands  
in use, cost  
very low. Sent  
on trial. Permit  
us to quote you  
prices.  
**W. R. SANTLEY & CO. Wellington, Ohio**

**McNeil's Balanced Churning Barrow**  
FOR BLAST FURNACES, FOUNDRIES, ETC.

**G. C. McNeil, Akron, Ohio.**  
Send for circular No. 3.

Advertisements marked \* are inserted every other week, and do not appear in this issue.



# MAGNOLIA METAL

INDORSED BY

## UNITED STATES AND GERMAN GOVERNMENTS.

### BEST ANTI-FRICTION METAL FOR

### Steamship, Car, Dynamo and all Machinery Bearings.

NAVY DEPARTMENT.

BUREAU OF STEAM ENGINEERING, WASHINGTON, March 25, 1888.

SIR: I herewith forward to you a copy of the Report of the several tests made of "Magnolia Metal" by this bureau.

Respectfully,

GEORGE W. MELVILLE,

Eng-in-Chief, U. S. N., Chief of Bureau.

CHAS. B. MILLER, President,  
Patentee "Magnolia Anti-Friction Metal," New York.



Beware of Counterfeits.  
Our Trade Mark  
is stamped on each piece.



#### UNITED STATES GOVERNMENT REPORT.

Magnolia Metal vs. Parsons' White Brass, the latter being the best English Metal.

	Average revolutions per minute.	Pressure per square inch.	Highest Temperature.	Remarks.
Jan. 17, 1888.				
Magnolia.....	2,008	100 Lbs.	103° F.	
Parsons'.....	2,008	100 "	280° F.	Parsons' oil hole choked up and oil smoking.
Jan. 19, 1888.				
Magnolia.....	2,008	150 "	130° F.	
Parsons'.....	2,008	150 "	360° F.	Result in favor of Magnolia.

#### SUMMATION.

"A summation of the results of the experiments shows the great superiority of Magnolia Metal over Parsons' White Brass, the Magnolia, even after the heaviest stress, retaining a smooth polished surface. This metal has also been tested in the friction machine up to 600 lbs. per square inch, the limit of the machine."

C. J. McCONNELL, Chief Engineer, U. S. N.  
WM. A. WINDSOR, P. A. Engineer, U. S. N.  
F. C. BOWERS, Asst. Engineer, U. S. N.

Rear Admiral BANCROFT GHERARDI, Commandant, Navy Yard, New York.

Extract from Table A, U. S. Government Report, giving results of combined runs, ahead and reverse, for Friction Tests of Magnolia Metal and Parsons' White Brass, 600 lbs. per square inch.

	Weight applied in lbs. per square inch.	Time in minutes.	Revolutions per minute.	Velocity of rubbing surface in feet per minute.	Temperature of Test Metals.			Coefficient of Friction.
					Maxim.	Mean.	Mean Increase.	
MAGNOLIA.....	600	200	500-15	323.76	104.0	93.90	12.40	0.00129675
PARSONS' WHITE BRASS...	600	200	478.63	501.22	177.0	140.30	46.70	0.004075

United States Navy record on a Journal: 500 revolutions a minute; 600 lbs. to the square inch; average temperature, 94° Fahrenheit; highest; 104° Fahrenheit; coefficient of friction, 0.0013; declared four times as good as standard metal of United States and English Navies.

We respectfully recommend its purchase for purposes coming under the cognizance of the "Bureau of Steam Engineering."

Respectfully submitted,

WM. A. WINDSOR, P. A. Eng., U. S. N.  
F. C. BOWERS, Asst. Eng., U. S. N.

June 12, 1888.

To the Commandant, New York Navy Yard.

#### MASON COLLEGE, BIRMINGHAM, ENGLAND.

Messrs. THE MAGNOLIA ANTI-FRICTION METAL CO.

GENTLEMEN: This is to certify that I have made a series of tests of your Magnolia Metal in a machine specially designed to reproduce as nearly as possible the practical working condition of Machine Bearings. I have also made a series of exactly similar tests in the same Machine on the best quality of Babbitt and Gun Metal.

A detailed report on these tests was forwarded to you recently. The experiments were made on three different diameters of journal; four different lengths, four different speeds and five different pressures. In all, between three and four thousand tests were made, in each of which the temperature of the bearings and the friction were carefully and exactly measured. The numerical results are set forth in the detailed report in fourteen tables and a number of diagrams.

I am pleased to state that your metal has proved by these tests to be much superior to either Babbitt or Gun Metal. It produces less friction, it keeps the bearing temperature lower, requires less lubrication and possesses greater durability. This characteristic of durability is a most important one within the wide limits of condition covered by my tests. It would be true to say that the longer the Magnolia Metal bearing is used, and the more severe the duty imposed on it, the better become its conditions.

It is satisfactory to note that the elevation of bearing temperature above that of the surrounding air is, under all ordinary conditions, extremely low. With prolonged use the temperature shows no tendency to rise, and the surface becomes more and more smooth and glossy.

The general conclusion at which I have arrived from these experiments is that Magnolia Metal is a very excellent material for bearings; that its special good qualities appear more particularly when it is subjected to intense pressure, such as could not be borne by other metals without firing or melting, and that under very trying circumstances the Magnolia Metal may be trusted to remain cool, that is, at a temperature that does not interfere with good working. I am, gentlemen,

Yours truly,

ROBERT H. SMITH,  
Professor of Engineering, A. M. I. C. E., M. I. M. E., etc.

#### NEW YORK CITY.

MAGNOLIA ANTI-FRICTION METAL CO.

GENTLEMEN: At your request I have made several Friction Tests of Journal Bearing Metals. Those selected were your own Magnolia Metal, taken from the stock as made day by day and Hoyt's Genuine Babbitt and the Deoxidized Genuine Babbitt, the latter two supposed to be the best of their class.

The machine used was a five-inch Collar, keyed on a three-inch shaft, lubricated with Sperm Oil, five-inch Collar running in the oil.

With light pressure and slow revolutions of shaft the metals showed little difference, but with rapid revolutions and heavy pressures MAGNOLIA METAL showed GREAT SUPERIORITY.

Herewith is a detailed statement of the tests of the three metals.

Yours truly,

NEW YORK, November 7, 1889.

HERBERT GRAY TORREY.

#### TIME OF TEST—ONE HOUR.

	TIME IN MINUTES.	MAGNOLIA ANTI-FRICTION METAL.	HOYT'S GENUINE BABBITT.	DEOXIDIZED GENUINE BABBITT.	POUNDS PRESSURE PER SQUARE INCH.	REVOLUTIONS OF SHAFT PER MINUTE.	SPEED OF RUBBING SURFACE PER MINUTE.
	0	65° F.	90° F.	90° F.	2 Genuine Babbitts 200 300 lbs. 300	1600	2095 ft.
	10	115°	156°	140°		1550	2030 "
	20	150°	180°	170°		1500	2030 "
	30	160°	230°	230°		1500	1965 "
	40	180°	345°	330°		1000	1965 "
	45		397°	360°		1000	1965 "
	50	270°		360°		1000	1965 "
	55			375°		1000	1965 "
	60	400°				1000	1965 "
Remarks.....		Magnolia ran full time free without melting out or stopping machinery.	Hoyt's melted and stuck to shaft at end of 45 minutes.	Deoxidized Genuine Babbitt melted and stuck to shaft at end of 55 minutes.			

CHARLES TAYLOR, Assistant.

NOTE.—Mr. Torrey is well known as U. S. Assayer, having been in Mint service in New York for thirty years.

Respectfully,

H. G. TORREY.

#### THE FASTEST STEAMSHIP ON THE GREAT LAKES INDORSES MAGNOLIA METAL.

THE MAGNOLIA ANTI-FRICTION METAL CO., New York City.

N. Y., L. E. &amp; W. R. R. LINE. THE UNION STEAMBOAT CO., CHICAGO, November 18, 1889.

GENTLEMEN: Take pleasure in giving you a record of the use of Magnolia Metal on the steamship "Owego." The "Owego" is 2,500 tons burden, has triple expansion engines, 3,000 horse-power, high pressure 28 in. diameter, intermediate 42½ in. diameter, low pressure 72 in. diameter, and has 4½ feet stroke pistons. Main shaft 14 in. diameter.

The Magnolia Metal was used in low pressure crank pin brasses 14 in. diameter, 16 in. long. Your metal was placed at quite a disadvantage. Post's zero had melted out the first trip used in this bearing, and it was well cut up on the surface. Was in a great hurry and did not have time to run the Magnolia Metal as I should like to have done. The first trip to Buffalo, August 1, intentionally let the bearings run loose, and there was a great deal of pounding upon the Magnolia Metal. Took this precaution because Post's metal had melted. Expected to see the Magnolia Metal all used up upon examination in Buffalo, but was surprised and gratified upon the examination. Keyed the brasses up, and the chill has not since been off the brasses, although we have encountered weather that would lift the propeller wheel out of the water. These facts are taken from my log record, and you are welcome to them.

Yours truly,

[Signed] R. L. PECK, Chief Engineer Steamer "Owego."

# Magnolia Anti-Friction Metal Co.

OWNERS AND SOLE MANUFACTURERS,

## No. 74 Cortlandt Street, New York.

LONDON OFFICE:

CHICAGO OFFICE:

75 QUEEN VICTORIA STREET.

CLUB ROOM 5, GRAND PACIFIC HOTEL.



# EDISON SYSTEM.

♦ **BEST IN EVERY WAY.** ♦

Most Economical. Cheapest. Safest. Simplest. Most Reliable.  
Most Universal in its Applications.

<p><b>CENTRAL</b></p> <p><b>Stations.</b></p>	<p>Models of Engineering Skill.          Handsome Investments.          Perfect satisfaction to consumers.          Power sold in any amount cheaper than steam power.          Current for Storage Batteries, Electro-plating, etc.          Current to replace all Chemical Batteries.          Current for operating Electric Railways.          Absolute safety to life.          Hundreds of Stations in towns from 2,000 population to largest cities.          Perfect, Simple and Cheap Meters for sale, of light or current, for any use.          Only perfect underground system.          Underground Systems in use since 1882, and perfectly reliable.          Fundamental Patents—absolutely controlling—now in courts.</p>
<p><b>Isolated</b></p> <p><b>PLANTS.</b></p>	<p>12 lamps—16 candles each—per horse power.          Guaranteed average life 600 hours.          With coal at \$3 per ton, light as cheap as by gas at 60 cents per thousand feet.          Over 1,000 Isolated Plants in use.          No one having power can afford to use any other light.          Absolute safety from fire.          Perfect satisfaction guaranteed.          Large saving guaranteed over any gas or any other electric system.          Dynamos perfectly automatic.          Lamps perfectly uniform.          All devices incombustible.</p>
<p><b>WIRING</b></p> <p>OF</p> <p>BUILDINGS</p> <p>AND</p> <p><b>Residences.</b></p>	<p>Have your building wired while in process of construction.          Have it wired by a thoroughly responsible concern.          Have it wired by a concern you are likely to buy a plant from in future.          Have it wired by company owning fundamental patents.          Have it wired by company having longest experience.          Have it wired with porcelain wiring devices.          Have it wired under rigorous specifications.          A building is better not wired than wired poorly.          Poor wiring will cause you trouble and expense forever, and is extremely dangerous from fire.</p>

## United Edison Manufacturing Co.

--- MAIN DISTRICT OFFICES: ---

Eastern States—65 Fifth Avenue, New York.

Central States—Rialto Building, Chicago, Ill.

Mountain States—730 17th Street, Denver, Col.

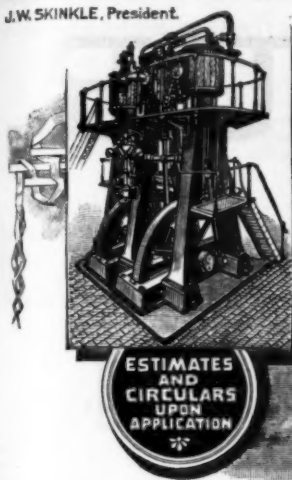
Pacific States—Chronicle Building, San Francisco, Cal.



J.W. SKINKLE, President.

J. KOENIGSBERG, Secy.

LEO. RASSIEUR, Vice Pres't.



**THE CONSOLIDATED  
ICE MACHINE CO.**  
MANUFACTURERS OF  
**ICE MAKING  
AND  
REFRIGERATING MACHINERY.**  
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WORKS & PRINCIPAL OFFICES.  
WEST 18TH ST. VIADUCT  
**CHICAGO ILL.**

**246  
MACHINES**

IN OPERATION

Making Ice—Refrigerating, Breweries, Packing Houses, Cold Storage Houses, Oil Refineries, Creameries, Hotels, &c.

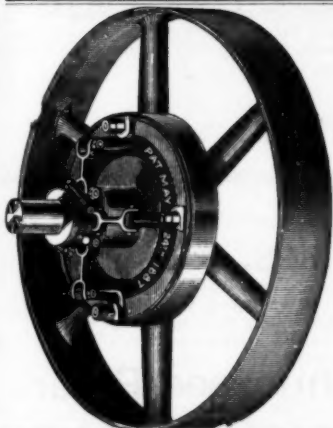
**BUY THE BEST AND SAVE MONEY.**

All machines built by us are made to gauge and templet. Highest economy secured. Best results obtained. Machines in steady operation for more than ten years.

**NO FAILURES.**

**ICE MACHINES.**

**Louisville Machine & Elevator Works**  
HYDRAULIC, STEAM  
ELECTRIC & HAND POWER  
ELEVATORS  
SULZER & VOGT  
WRITE FOR ESTIMATES  
LOUISVILLE, KY.



**The MOORE & WHITE CO.**  
1312 Buttonwood St., PHILADELPHIA, PA.  
**Friction Clutches, &c.**  
**Cut-Off Couplings, &c.**  
**Paper Mill Machinery, &c.**

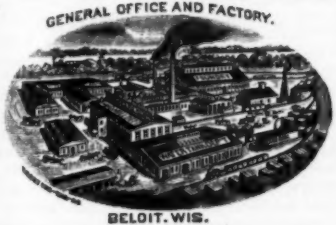


**HILL  
Clutch Works,**  
CLEVELAND, OHIO.

NEW YORK:  
18 CORTLANDT STREET.  
CHICAGO: 20 S. Canal Street. 305 Kasota Bldg.  
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**POWER PLANTS**  
Designed, Erected and Furnished.  
Send for new Catalogue, Power Transmission Machinery.

**Machine Molded Pulleys, Hangers, Boxes  
COUPLINGS AND SHAFTING.  
FIRE FRONTS, HEAVY MACHINE CASTINGS  
OF ALL DESCRIPTIONS.  
HOISTING AND TRANSMISSION SHEAVES.  
Get Our Prices Before Purchasing.  
Estimates given on Pulleys and Band Wheels to 10 feet in diameter. Send for Catalogue.**  
**TODD PULLEY AND SHAFTING WORKS  
EAST ST. LOUIS, ILL.**



**ECLIPSE FRICTION CLUTCH PULLEYS  
AND CUT-OFF COUPLINGS.**

SEATTLE, WASHINGTON TER., 5 26, 1889.  
Eclipse Wind Engine Co., Beloit, Wis.  
DEAR SIR: The Clutch Pulley (diam. 100 in., face 21 in) works satisfactorily in every particular, and is a great convenience. We have two, and can stop either the main saws or the gang edger, or both whenever desired, without stopping the engines.  
Yours respectfully,  
Yesler Wood, Coal & Lumber Co.,  
J. D. Lowman, Sec'y.

**ECLIPSE WIND ENGINE CO., - Beloit, Wis.**  
Send for July, 1889 catalogue, and see where and by whom they are used.

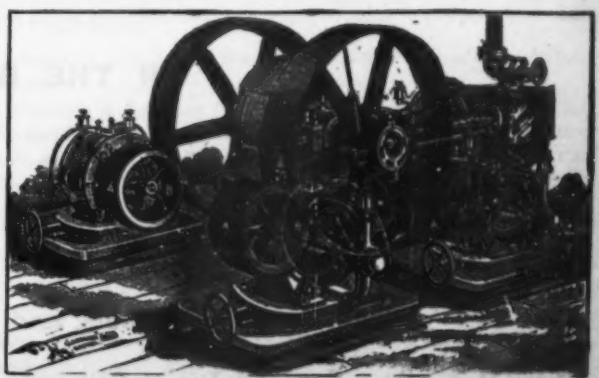


**The Evans Patent Friction Belting.**  
FOR TRANSMITTING POWER WITH EITHER STEADY OR VARIABLE SPEED.



WE  
GUARANTEE  
GREATER  
EFFICIENCY  
THAN WITH  
ORDINARY BELTS.

Send for Catalogue to



The cut above shows four dynamos being driven from the fly wheels of one engine. This effects a great saving in room and in belting. Each dynamo may be started or stopped independently of the rest without slowing the engine, by simply turning a hand wheel.

By the use of our Speed Cones the speed of any machine can be easily changed automatically or by hand, while the machine is running and a very fine adjustment can be obtained.

**THE EVANS FRICTION CONE CO., - - - 85 Water Street BOSTON**



# NEW DECATUR,

ALABAMA.

The New Industrial City of the Great Tennessee Valley.

## BULLETIN OF PROGRESS.

NOVEMBER 11, 1889.

### Railroads.

1. Grading contractors are at work changing the line of the Memphis & Charleston Railroad, so as to pass through the Union Depot at New Decatur. At present it passes through old Decatur only, a mile and a-half away. Grounds for a new freight depot and freight yards have been located in New Decatur.
2. The end of the track of the Decatur, Chesapeake & New Orleans Railway, a connection of the Chesapeake & Ohio system, is within twenty-five miles of New Decatur, and the engineers are locating the line to this point. Grounds for shops and freight yards have been donated them. The road will afford another northern and eastern outlet for New Decatur.

### The River.

The first steamboat to pass through the famous obstruction to navigation on the Tennessee River, known as the Muscle Shoals, a few miles below New Decatur, was the "A. C. Conn." She made the trip through the government canals on the 5th instant. The river will be thrown open to navigation before January. The Land Company at New Decatur are building tracks to their new river dock landing to connect it with the railroads.

### Freight Rates.

Heretofore New Decatur has been on an unequal footing with other towns in Northern Alabama as regards rates, but this discrimination has been completely remedied by a schedule of rates which goes into effect to-day on all the roads, giving New Decatur the benefit of the lowest rates from all points.

### Industries.

1. The charcoal iron furnace, which was leased to the New "Decatur Iron, Land & Lumber Company" on October 22d, is being prepared for blowing in, and the necessary trestling and tracks are being built. The same company has leased the adjoining works of the Decatur Charcoal & Chemical Works.
2. The Decatur Car Wheel Manufacturing Company are making the alterations and additions necessary to double their working capacity, increasing it to 200 wheels daily.
3. The Decatur Lumber Company are expending \$40,000 in additional machinery and other improvements to increase their capacity.

### New Buildings.

1. The new and handsome school building, of brick and stone, to cost \$20,000 is nearly completed.
2. The Westminster Presbyterian Church, one of four new churches being erected, was opened and formally dedicated on the 10th instant.
3. Building improvements, both business and private, are steadily going on. A handsome 5 store block, part of the north wing of the projected Casa Grande Hotel building, is completed, and the entire building (680 feet frontage) will be completed according to the original plans next year.

### Other Improvements.

The town of New Decatur has placed an issue of \$30,000 of municipal bonds at par for the purpose of street improvements.

### Projected Enterprises.

Negotiations will be closed this week for extending the system of manufacturers' switch tracks in New Decatur and forming them into a belt line.

### Opening of the Tennessee River.

On November 12th the steamer "A. C. Conn" passed through the Muscle Shoals, on her way from Green Bay, Wisconsin, to Chattanooga. The river is therefore practically open to navigation, though it will not be formally opened for a few weeks. It was a notable trip. Her owners, formerly of Green Bay, but now of Chattanooga, started her from Green Bay to Lake Winnebago through the Fox River canal (built by the Government to connect Lake Michigan with Lake Winnebago), thence across the lake and up the upper Fox River to the Portage canal, thence down the Wisconsin, to Prairie du Chien, Wis., on the Mississippi, thence to the Ohio, thence up the Tennessee to the foot of Muscle Shoals, where she had to lay from May, 1888, until November, 1889. The cities of the Tennessee Valley, Knoxville, Chattanooga, New Decatur, Florence and Sheffield, and all intermediate points, are now, after many long years of labor and the expenditure of millions on the part of the Government, in the possession of cheap water transportation to all points of the Ohio and Mississippi and the Gulf of Mexico.

THE DECATUR LAND, IMPROVEMENT AND FURNACE COMPANY have prepared and will shortly publish for free distribution, a beautifully-printed and illustrated pamphlet of about 60 pages, of a convenient size for the pocket, entitled

### "ON THE BANKS OF THE TENNESSEE."

containing 100 questions briefly but fully answered, about Alabama, Northern Alabama, the Valley of the Tennessee and New Decatur. It has been their endeavor to present in a compact, readable and attractive form all the information that may be sought by capitalists, investors, manufacturers in iron, wood or cotton, farmers, stock raisers or mechanics. It will be accompanied by a colored map of Northern Alabama, showing the counties of the Cereal Belt or Tennessee Valley, the iron ore and coal fields tributary to New Decatur, and its railway and river connections with all parts of the United States.

For Maps, Pamphlets and other Information about New Decatur, address

The Decatur Land, Improvement & Furnace Company, New Decatur, Alabama.



Ex-Mayor ABRAM S. HEWITT, of New York, says this section of Alabama "is the only place upon the North American Continent where it is possible to make iron in competition with the cheap iron of England."

## BUSINESS POINTS

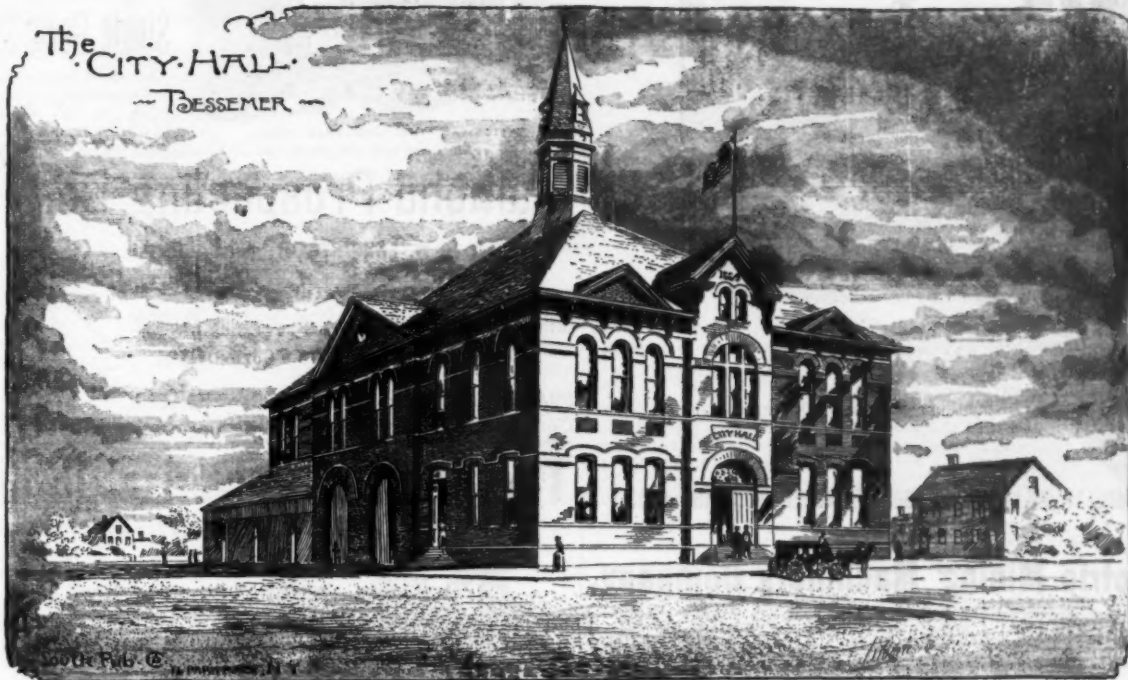
ABOUT

# BESSEMER CITY, ALA.

WORTH CONSIDERING BY BUSINESS MEN.

### COTTON MANUFACTURING.

With the Cotton growing near the mill; at the present cost of spindles in position; spacious sites costing nothing; coal delivered to mills at \$1.25 per ton; modern steam machinery with its minimum consumption of fuel, Bessemer offers marked advantages.



The Land Company offers on leases for five or ten years, with very liberal terms, One Hundred Farms, 5, 10 and 15 Acres each, and will erect cottages and put up fencing; but only to parties who have, by experience, been successful in these branches of business. Don't want any inexperienced experimenters on any terms.

100 Fruit, Truck and Dairy Farms.

## Bessemer's Iron Foundations.

**First.—The DeBardeleben Coal & Iron Company**—Two furnaces in blast; two batteries of 170 coke ovens each—340. Extensive coal and iron mines, limestone rock, etc., in active operation. Furnaces situated within the city limits, occupying 160 acres of land—enough for multiplied extensions. Average output 225 tons daily.

**Second.—The Bessemer Steel & Iron Company** Two furnaces go in blast December, 1889; two batteries of 200 coke ovens each. Extensive coal and iron mines, limestone rock, etc., in active operation. Furnaces situated within the city limits, occupying 100 acres of land—enough for multiplied extensions. Average output 225 tons daily.

**Third.—The Little Belle Iron Company**—To go in blast December, 1889. One charcoal furnace, situated within the city limits, occupying 50 acres of land, enough for multiplied extensions. Average output 60 tons daily.

**Fourth.—The Bessemer Rolling Mills**—Situated within the city limits, occupying 13 acres of land. When running full works 700 hands. One hundred tons possible daily output.

**Fifth.**—In addition to the coal and iron mines above referred to, in connection with the five furnaces, these proprietors own the **MAGNETIC ORE LAND COMPANY**. The total coal, iron and limestone lands owned by these corporations amount to over

**200,000 ACRES.**

The **EARLIEST SELECTED** and choicest lands in Alabama, all directly tributary to the City of Bessemer, representing, with furnaces, rolling mills, etc., an aggregate of \$8,000,000, not including other lines of business.

Iron Manufacturers in Bessemer will have a direct advantage of \$2.50 to \$3 per ton on the cost of Pig Iron, compared with Pennsylvania Prices.

## TRANSPORTATION EVERYWHERE UNEXCELLED.

The Queen & Crescent Line—Cincinnati to New Orleans.

The Louisville & Nashville Lines.

The Georgia Pacific and Danville Lines.

The Kansas City, Memphis & Birmingham Line.

The Birmingham & Bessemer Railroad runs trains every hour to Birmingham.

The Bessemer & Huntsville is completed as far as Chepultepec.

The Bessemer & Tuscaloosa is completed to Woodstock, a distance of thirty miles, lacking only eighteen miles of reaching Tuscaloosa.

The Bessemer & Selma has been surveyed and grading will soon commence.

The Mobile & Bessemer, an extension of the East Tennessee, Virginia & Georgia, is in process of rapid construction.

The Sheffield & Bessemer is projected to Bessemer. It is now built as far as Jasper, forty miles northwest.

The Birmingham, Powderly & Bessemer Street Railway, Bessemer to Birmingham, will be running by November 1st, half the line being now graded.

**WOOD-WORKING INDUSTRIES**—The primeval forests of Alabama, tributary to Bessemer, offer manifold attractions to Wood-Working Manufacturers.

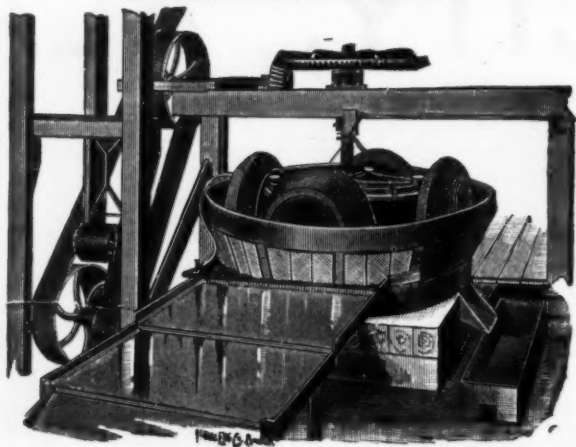
**CORRESPONDENCE SOLICITED.** For particular information as to price of lots, manufacturing sites and inducements to establishing plants in this unrivalled locality, address

H. M. McNUTT, Secretary.

*H. M. McNutt*  
President



## WISWELL Ore Pulverizer and Amalgamator COMBINED.



The following testimonial from Mr. Marsden, of the firm of Farrel & Marsden, manufacturers of Stone Breakers and Ore Crushers, Ansonia, Conn., speaks volumes for the Wiswell Mill:

*Wiswell Electric Mining Machinery Co.:*

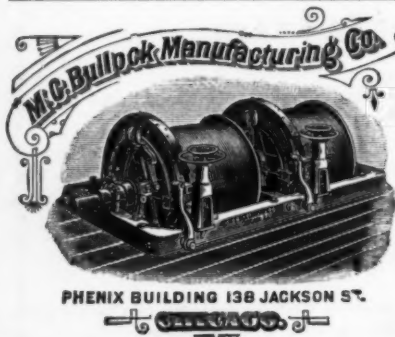
GENTLEMEN—After carefully inspecting your mill and seeing it in operation, I do not hesitate to say that it is one of the best, if not the best pulverizer and most complete gold-saving machine I have ever seen. Please accept congratulations for your success.

S. L. MARSDEN.

WE FURNISH A COMPLETE MILL FOR \$2,500, DELIVERED ON BOARD CARS.

FOR FURTHER INFORMATION ADDRESS

**Wiswell Electric Mining Machinery Company,**  
4 POSTOFFICE SQUARE,  
A. A. REEVE, Treasurer. BOSTON, MASS.



Lane's Band Friction Single and Double Cylinder

**PORTABLE HOISTS**  
STANDARD DRUMS,  
Winze Hoists, Exploring Hoists,  
Wire Rope Haulage Machines,  
ORE BUCKETS, SKIPS,  
CAGES AND SHEAVES,  
STEAM PUMPS, BOILERS, Etc.

## Bullock's Diamond Prospecting Core Drills,

For Surface or Underground Prospecting. No Restrictions as to Use.

THE ONLY RELIABLE DIAMOND DRILL MADE.

Improved Corliss Engine, Slide Valve and Straight Line Engines,

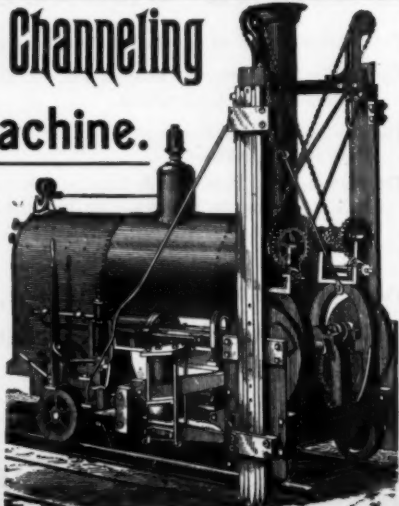
Eclipse Rock Drills, Air Compressors and Quarrying Machines.

WRITE FOR WHAT YOU WANT. Cable Address, BULLOCK, CHICAGO.

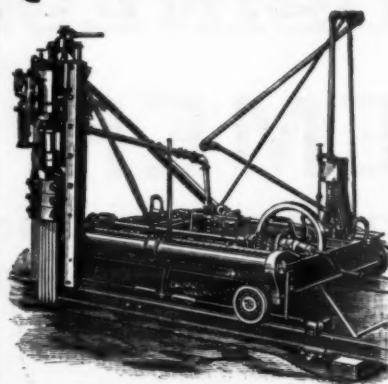
## Wardwell Stone Channeling AND Quarrying Machine.

WILL pay for itself in a short time in reduced cost of getting out Stone. Has no equal for efficiency and economy of operation. Pronounced by those who have used it the best machine for the purpose in the world. Send for illustrated catalogue, with full descriptions and letters from parties now using the machines.

**Steam Stone Cutter Co.**  
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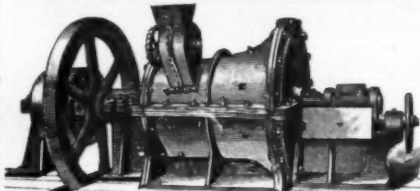
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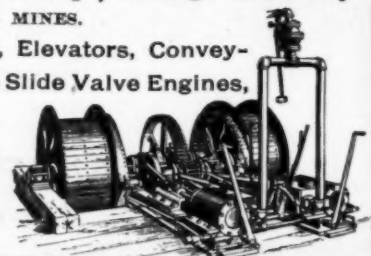
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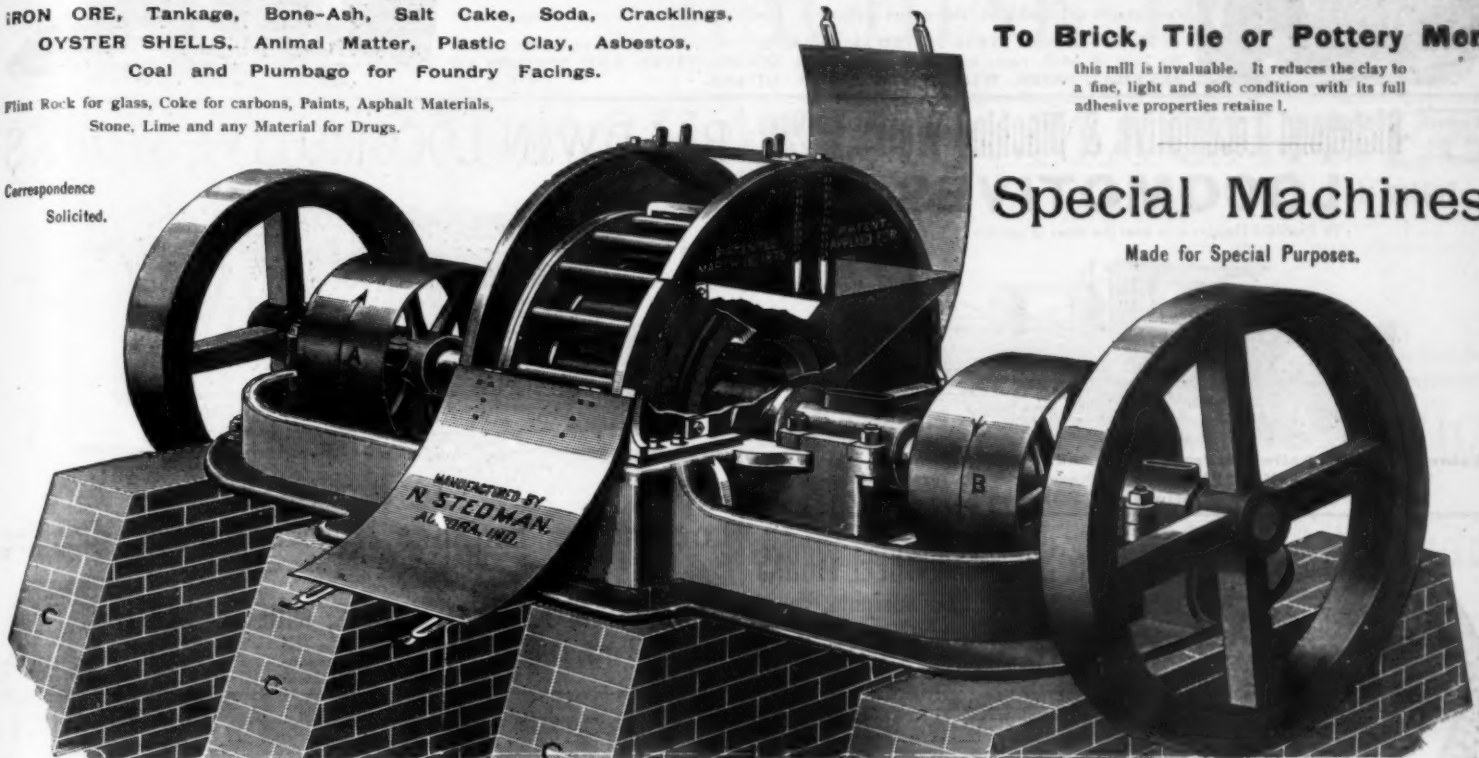
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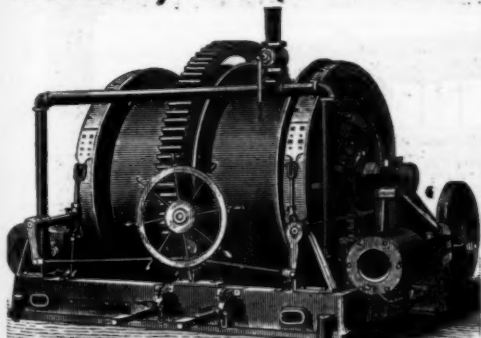
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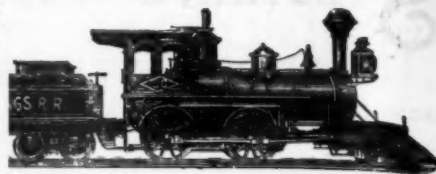
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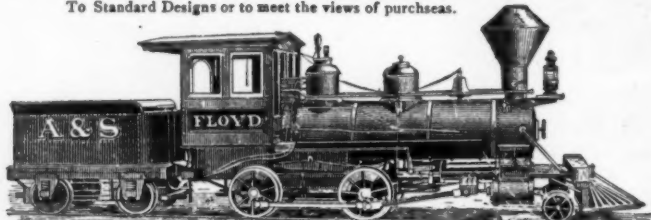
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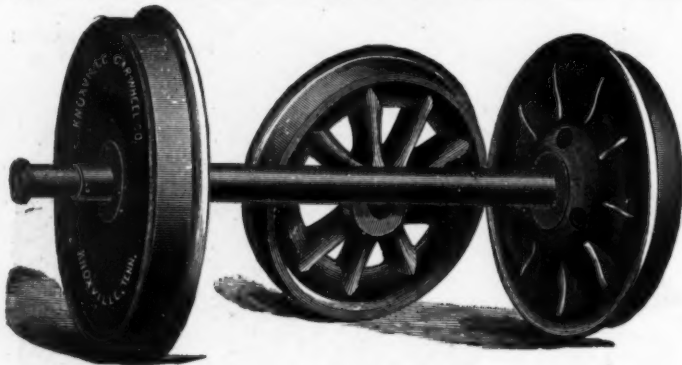
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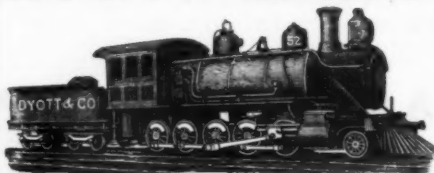
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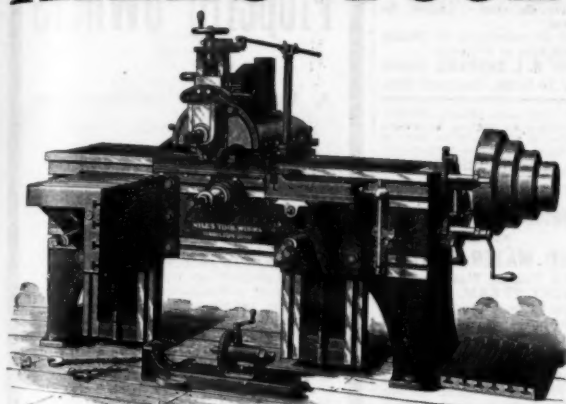
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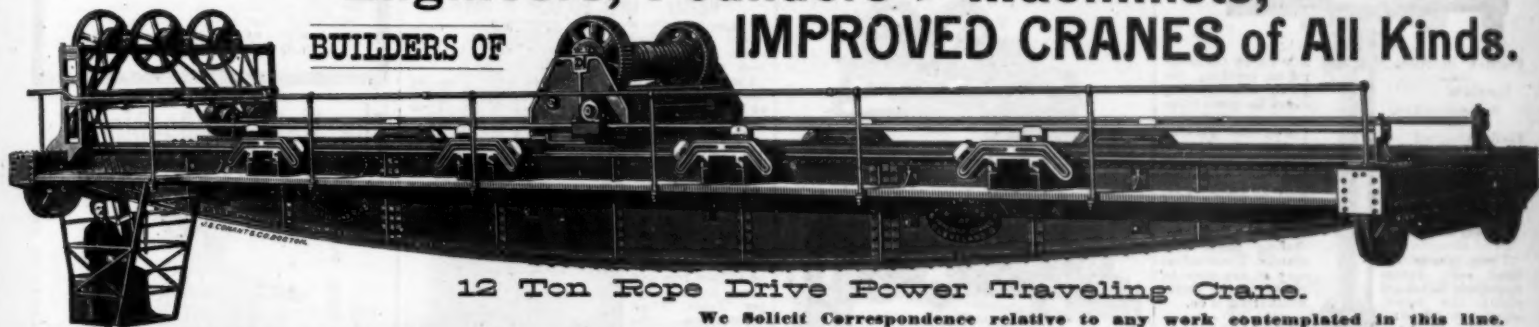
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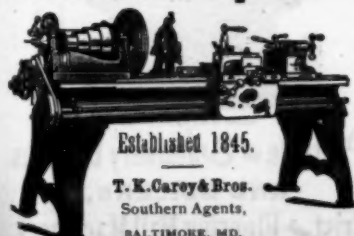
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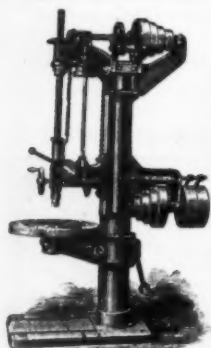
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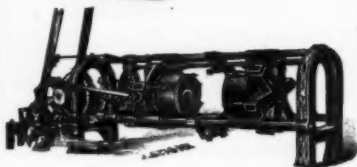
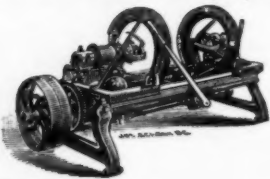
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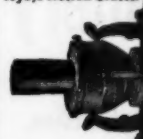
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Catalogue and Price List**Also Manufacture****Portable & Stationary Engines  
AND BOILERS,  
Grist & Flouring Mill Machinery.**



# Read What a New York Miller Says of the Case Company.



OFFICE OF PETER SNYDER,  
DEALER IN FLOUR, FEED AND LUMBER,

MANLIUS STATION, N. Y., October 28, 1889.

The Case Manufacturing Company, Columbus, Ohio:

GENTLEMEN: After running my mill over two months, I feel it my duty and in justice to you to state that I am more than pleased with the mill you built for me. It started like a clock "from the word go". My flour is discounting the fanciest brands of flour in the market. My clean-up is equal to any mill in the State. I will say that the Case Rolls and Flour Dressers cannot be beaten in the world for light running and ease of access to all their parts. I would advise any miller building a new mill or remodeling an old one to place their contract with the Case Company.

Thanking you for the prompt and efficient manner in which you furnished my machinery in so short a time, after so great a loss and damage by fire burning your works, and with the best of wishes I remain,

Yours respectfully,

PETER SNYDER.

For full particulars regarding the best FLOUR OR CORN MILL MACHINERY, address



## THE CASE MANUFACTURING CO., Columbus, Ohio.

### TRADE NOTES.

MR. GOULD, of the Lowell (Mass.) Card Co., is about to make his third trip South. The company report the best six months' business in their experience for years past.

BORING AND DRILLING MACHINES.—The Newark (N. J.) Machine Tool Works issue a neat little pamphlet descriptive of their special horizontal boring and drilling machinery, for which they claim exceptional merits. These machines come in four sizes, and price-lists, descriptions, etc., are furnished in the circular.

FOOT AND POWER LATHES.—The Sebastian-May Co., 187-191 West Second street, Cincinnati, Ohio, are turning out extra good samples in the way of drill presses, foot and power lathes, machinists' and amateurs' supplies. The fact that manual training schools are coming into prominence is to be specially noted, and such a house as the Sebastian-May Co. has an excellent opportunity to forward this latter-day theory of industrial progress.

THE N. Y. World, discussing the question of safe electric lighting where high tension and alternating currents are used, devotes 3½ columns in a recent Sunday issue to a descriptive of Okonite wire, and presents strong testimony showing that its use will make safe electric lighting, under such circumstances, a certainty. The article in question created a great deal of comment in electrical circles, and contained a lengthy description of the Okonite Co. and their new factory just completed at Dundee, N. J.

It is claimed that the Magnolia anti-friction metal has been proved by recent extraordinarily severe tests to be the best packing for piston beds yet devised. We noted last week a singularly protracted trial of the Magnolia metal, as reported by Chief Engineer Peck of steamer Owego, of the Lake Erie & Western's Line. The report thoroughly establishes the permanency and reliability of the Magnolia metal. Dr. Torrey, whose report is published in the full-page advertisement of the Magnolia Co. in this issue, has tested all the best metals of reputation in England.

ECONOMY OF STEAM.—The Barnard vacuum system for circulating steam in heating and drying coils offers special advantages which will be readily recognized by all who are posted on the subject of the management of steam. By the Barnard system exhaust steam is circulated any distance, and it is claimed for the apparatus that it will do at least 25 per cent. more effective work than can be effected by back-pressure plants. The Barnard system underwent a thorough trial in the mills of the American Linen Co. at Fall River, Mass., the results of which will be furnished on application. Economy in steam has long been a desideratum, and it does appear that the Barnard system complies with the details of the problem.

### Business Chances.

CHANCE FOR A HOSIERY MILL.—J. K. Lamb, 203 Chestnut street, Philadelphia, Pa., announces that the owner of a large hosiery mill, now in successful operation in that city, will sell and move the entire plant to a Southern locality, and take part stock in a company for the same if sufficient and safe inducements are offered.

A VALUABLE TEXAS PASTURE FOR SALE. Attention is called to the advertisement in this issue of the forthcoming sale of the Black Jack pasture in Aransas county, Texas. This tract of some 38,000 acres offers exceptionally favorable opportunities for the conduct of the ranching business. The advertisement contains a full description of the property, and the points which commend it to the notice of investors are succinctly presented.

GAS works are among the best investments. In our advertising columns will be found an investment of this kind offered for sale. The works are situated at Richmond, Ky., and have a good run of trade, both public and private. Any information regarding this property can be had by applying to G. W. Evans or Chas. S. Powell, Richmond, Ky. The same gentlemen also offer for sale water works charter granted by the legislature of Kentucky and an electric-light charter. Both these charters are of value, as the town is willing in each instance to be a liberal customer.

### "THE COLLIAU"

NEW AND IMPROVED  
HOT BLAST CUPOLA,  
(patent March, 1884), and New  
Smokeless and Automatic Feed  
Boiler (pat. 1886, in U. S.)  
Correspondence solicited for  
plans of foundries and the economical  
working of cupolas, the saving of fuel in  
melting iron and steel, and in the production  
of steam. Address VICTOR  
COLLIAU, Mechanical Engineer  
and Architect, 287 Jefferson  
Avenue, Detroit, Mich.

OILLESS BEARINGS.  
They will run for years  
without oil. Perfectly  
clean. No cutting or  
danger of fire from  
overheating. Send for  
New Circular of interest  
to users of Loose  
Pulleys.

North American Metal Co., 37 Bleecker St. N. Y. City.

SEND FOR PAMPHLET  
GIVING  
PRICES AND CUTS.  
BOSTON MASS.  
MASON & REGULATOR  
CO.

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## Ice-Making & Refrigerating MACHINERY,

ADDRESS THE

### Ring Refrigerating & Ice Machine Co.

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## DON'T BUY AN ENGINE OR BOILER

Until you have seen our circulars. Engines complete from 5 to 110 horse power, both Vertical and Horizontal, at prices below those of other reputable makers. 1400 in use. Boilers of every style. Automatic Engines for Electric Lights. Centrifugal Pumping Machinery for Drainage or Irrigation. Established 22 years. Perfect satisfaction guaranteed. Ask for Circular M and address

### Morris Machine Works,

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### The Jeffrey Mfg. Co.

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MANUFACTURERS OF  
ELEVATORS, CONVEYERS,  
DRIVING BELTS, for Handling



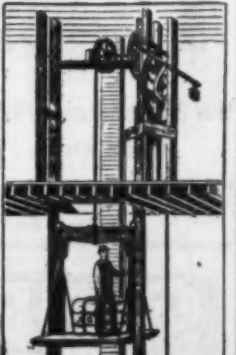
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ELEVATOR.

Barrels, Boxes, Bales, Grain, Coal, Ores, &c.  
Illustrated Catalogue sent on application.  
Correspondence solicited.

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OVER 6,000 IN USE.



Adapted for Warehouses, Stores, Factories, Hotels, Public Institutions and every place where merchandise, &c. is transferred from one story to another.

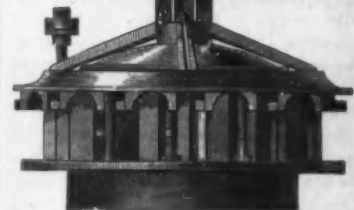
### JAMES BATES,

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## Water Wheel.



This Wheel is strong and durable. Excelled all other wheels in the great trial tests. Is in use all over the nation. I also make a specialty of

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For Paper, Cotton and Grist Mills.

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### THE IMPROVED LANCASTER

## Turbine Wheel.

Write for

Descriptive  
Catalogue.



Lancaster Turbine Wheel Co. Lancaster, Pa.

### HUGHES STEAM PUMP CO.

CLEVELAND, O.

MANUFACTURERS OF  
Single, Duplex and Compound Pumps  
FOR ALL DUTIES.  
WATER WORKS PUMPING ENGINES.  
SEND FOR CATALOGUES AND PRICE LISTS.  
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T. R. WINGROVE, 324 NORTH ST.  
BALTIMORE AGENT.



PERFORATED METAL  
FOR  
COTTON SEED OIL MILLS  
RICE MILLS  
MINING SCREENS &c  
THE ROBERT AITCHISON  
PERFORATED METAL CO.  
76 Van Buren St. Chicago, Ill.





## The Markets.

OFFICE MANUFACTURERS' RECORD,

BALTIMORE, December 3, 1889.

Several branches of the iron trade will hold meetings this month to confer concerning matters of trade interest for the ensuing year. The Eastern Pennsylvania Bar Iron Association, after a couple of unfruitful conferences, hold another meeting to-morrow at Philadelphia. The wrought iron pipe makers have had two or three meetings this fall, besides informal conferences. The nail makers, both East and West, have been getting together, and merchant steel makers have also been working in harmony. The steel rail makers, through their board of control, have been brought to a better understanding than has existed for years. Hardware dealers have been marking up prices, and the various associations in the hardware lines have been strengthening themselves.

A general disposition is manifested among manufacturers to avoid any but a legitimate advance in prices. The advantage of reasonable prices as against speculative prices is recognized. Demand is expanding, but capacity is also expanding. The projection of new furnaces and mills indicates a growing faith in the steadiness of the market.

Pig iron quotations are \$17@17.50 for gray forge, and special brands are \$18; No. 2 is \$17.50@18.50; No. 1 is \$18.50@19.50. A few makers who are far oversold have named 50 cts. higher prices at Philadelphia and New York. Pittsburgh and further Western prices are easily maintained at outside prices, owing, it is explained, to the excellent condition in which all Southern iron makers find themselves. Intimations were thrown out in Pennsylvania markets that certain large consumers would contract for six months' requirements of next year within a week or two. Certain it is that large buyers are watching the market very closely.

Muck bars are \$30 delivered, and steel slabs range from \$34 to \$44. Makers have business awaiting their acceptance.

All kinds of rolled iron are in active demand in all markets. Chicago, St. Louis and Ohio Valley markets are especially active. Makers of agricultural implements are now placing large orders for steel.

Merchant bars are 2 cts. to 1.80. Car builders are steady, but not large, buyers. Nails are strong at \$2.10 for iron and \$2.30 for steel in large lots. Factories are running full time, and there will be an accumulation of stocks before the great activity ceases.

Plate, tank and structural iron makers are simply unable to accept all the proffered business. Plates and angles were quoted on Monday at Philadelphia at 2.30 for iron and 2.40 to 2.50 for steel.

Steel rail makers are not chasing after buyers, and are quoting firmly at \$34 to \$35. Various rumors are started from time to time concerning large purchases to be made by railroad builders, but makers regard these simply as feelers put out by interested parties. Southern railroad managers have been fair buyers of rails, but mostly in small lots.

Ship, boat, car and bridge builders are all crowding ahead, and there is much to lend probability to the belief that the winter's business will be phenomenally heavy.

Our advices from reputable authorities, West and South, repeat previously recorded opinions as to prospects and prices.

Throughout the Southern iron making districts there is great activity, limited only by the capacity of railroad companies to carry freight. A more or less general equalization of freight rates is in progress, and, under the heavy volume of business, managers are manifesting a more harmonious disposition.

### HARDWARE.

Hardware continues steady, with but a limited demand. The only change in prices since our last issue was a new list on wire nails, adopted December 2. This makes a slight advance over the old list. The new price on plow bolts has been generally adopted by the manufacturers. There is some prospect of an advance price in screws in the near future. Tacks, etc., are held firm at the last advanced prices.

### DIXON'S

#### GRAPHITE PIPE JOINT GREASE

For Steam or Gas Pipes, Bolts, Screws, etc.  
Makes a Perfect Joint that can be opened with ease in three years or thirty years.  
JOSEPH DIXON CRUCIBLE CO.  
JERSEY CITY, N. J.

### JAS. P. WITHEROW.

ENGINEER & CONTRACTOR,  
Furnace & Steel

Plant Construction.

PITTSBURGH, U. S. A.

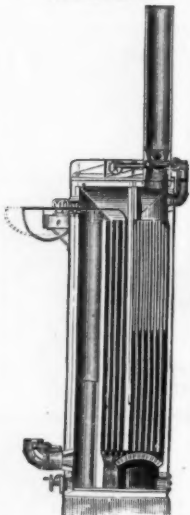
Blast Furnaces and Steel Works designed and erected complete in every detail ready for operation. Special attention given to the manufacture of

HEINE  
Safety Water Tube Boilers.

Owning an extensive manufacturing plant, I can guarantee promptness in execution, and satisfaction in any contracts undertaken by me.

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FIRE BRICK HOT BLAST STOVES.



BLAST FURNACES.

Main Office and Works, PHILADELPHIA, PA.

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Cinder Cars, Charging Barrows, Blast Furnace Equipment, Blowing and Stationary Engines.



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No. 235 Dock Street, Philadelphia.

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This Company makes advances upon Pig Iron stored at Furnaces (storage charge being nominal) or in Public Warehouses, upon reasonable terms.

Particulars upon Application.

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The "Original Candy"

Sewed Cotton Duck Belting.

Especially adapted for Main Drivers, Saw Mills, Cotton Gins, Cotton Presses, and for all places where belts are subjected to moisture or atmospheric changes, the "GANDY" stands paramount.

For further information, prices, etc., write

The Candy Belting Co.  
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STITCHED CANVAS BELTING

THE CHESAPEAKE BELTING CO.  
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## The Chicago Rawhide Mfg. Company,

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**RAWHIDE BELTING, LACE LEATHER,**

★ ROPE, LARIATS, FLY-NETS, ★

Picker Leather, Stock and Farm Whips, Washers, Hame Straps, Hame Strings, Halters and other Rawhide Goods of all kinds, by Krueger's Patent.

This Belting and Lace Leather is not affected by steam or dampness; has more grip than any other; never becomes hard; is stronger, more durable and the most economical Belting made. Especially adapted for the Southern trade on account of its resistance to moisture. The Rawhide Rope for Round Belting Transmission is SUPERIOR TO ALL OTHERS.

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**SHULTZ BELTING CO.**  
MANUFACTURERS OF

OUR BELTING IS TANNED ON THE SURFACES ONLY. INTERIOR IS RAWHIDE. The only Perfect Belt made. No slipping or lost motion.

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ALSO RAWHIDE LACE LEATHER.



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Foundry Facings.

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IMPROVED  
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BRANCHES:

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Keep Your Belts from Slipping

AND SAVE YOUR POWER BY USING

FRICTION COVERING FOR PULLEYS.

Satisfaction Guaranteed. Easily Applied. No Rivets. Effective. Agents Wanted.

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## Engines and Machinery.

Steam Engines and Boilers, Boiler Feeders and Pumps,  
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## MODERN ROLLER MILLS

Electric Light Engines, single and double; Brewers' and  
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Patterns made to order. Belting, Hose, Packing, etc.  
Machinery repaired on short notice.

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Send for Descriptive Catalogue, Price and Pattern List.

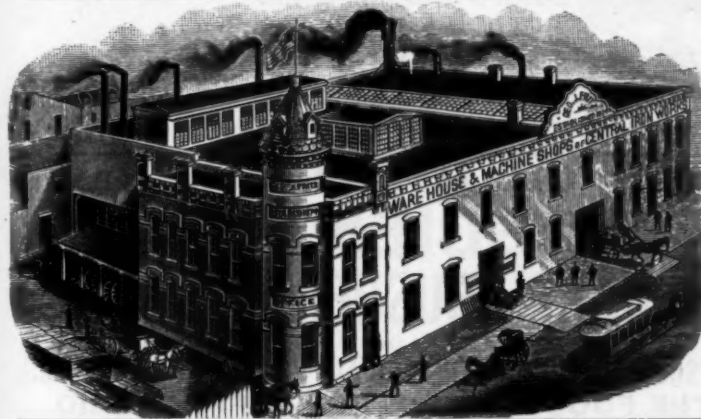
GEO. J. FRITZ

Founder and Machinist,

2008 to 2028 S. Third St.,

TELEPHONE 204

ST. LOUIS, MO.



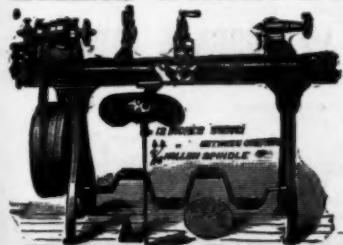
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Complete outfit for Actual Workshop Business. Lathes for Wood or  
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Tenoners, Etc., Etc.

Our Patent Velocipede Foot-Power is without question the best yet  
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"I do not see how your lathes can be produced at so low cost." "The  
velocipede foot-power is simply elegant." "Can turn a whole day  
and feel as little tired as though only walking around." "In regard  
to the velocipede foot-power, I consider the lathes without an equal."  
"I cut at the lathe for 11 hours, cutting off and threading 1 1/4 steam  
pipes. Those who saw it declared it equal to 15 hour job in machine  
shop." "Using the velocipede foot-power, the operator can hold a steady  
hand for doing the work." "For doing actual business, the lightest or  
the heaviest, give me the velocipede foot-power." "The 4 1/2 lathes  
is equal to any cutting twice the money." "What astonishes me is, how  
you can make machines to pay you for so small sum of money." "The  
4 1/2 lathes is the most perfect tool I ever saw for the money." "I can  
do double the amount of work on the velocipede, that I can on any  
other style of foot-power lathes." "There is no tax on strength, the  
body is at rest, steady, the hands and attention free for the job."  
"The velocipede - it is the best foot-power of any for lathes."

If desired, these machines will be sold ON TRIAL. The purchaser can have ample time to test  
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Cheapest and Best Automatic Steam Vacuum  
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LIQUIDS without Wear, Oil or Care.  
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NEEDLE POINT

CARD CLOTHING.

AND ALL OTHER VARIETIES  
WORCESTER, MASS.The Osborn  
COTTON GIN  
Lubricator.

PATENTED.

Consists in the application of oil to cotton  
being ginned. The quality of the cotton  
is thereby improved. The friction of the  
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a greater average length of staple. The  
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are some of the advantages resulting from  
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for sale. Agents wanted. Apply to

C. H. MERRY,

TACOO CITY, MISS.

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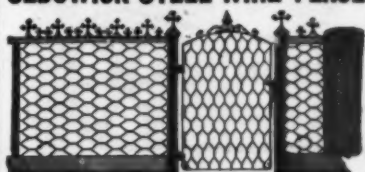
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Best Fences and Gates for all  
purposes. Free Catalogue giving  
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Wire Railing for Cemeteries, Lawns, Gardens, Off-  
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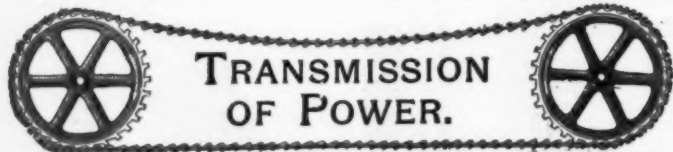


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Successors to BURR & DODGE, PHILADELPHIA,

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EWART DETACHABLE LINK-BELTING,

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ESTABLISHED 1853.



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Special Attention Given to CANNING OUTFITS.

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## Machines and Tools

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Fruit Can Dies and Tools. \* Canners' Outfits.

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 Write for our Catalogue and Price-List. Please mention this paper when writing.

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EVERY MILL GUARANTEED.

SEND FOR DESCRIPTION AND PRICES.

Complete Mill Outfits, Rolls or Buhrs.

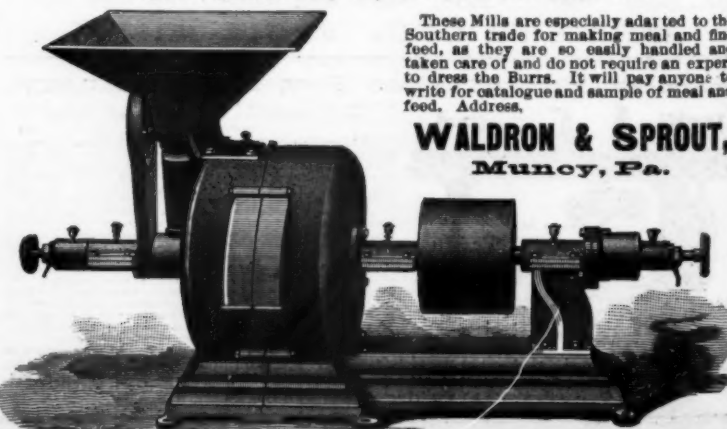
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SEND FOR CATALOGUE OF THESE AND  
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FOUR SIZES—12, 16, 20 and 30 inch.



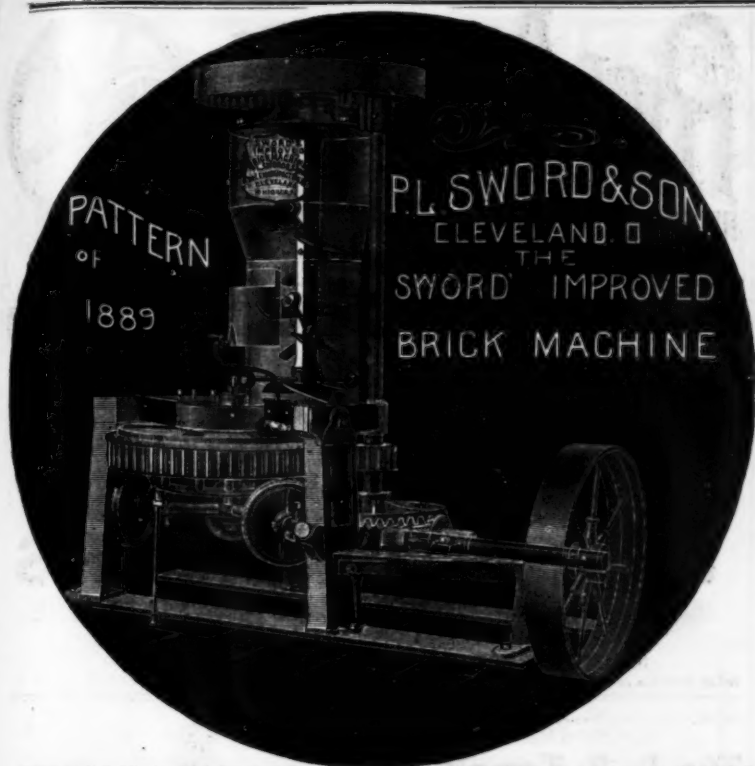
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Both Horse and Steam Machines.  
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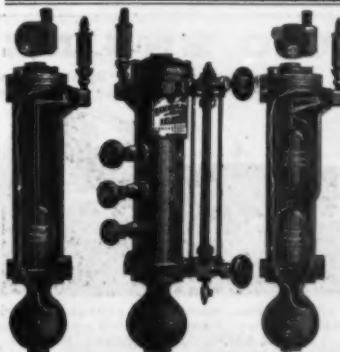
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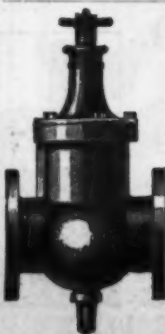


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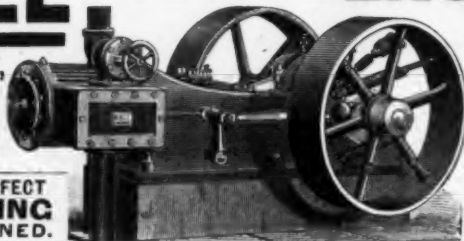
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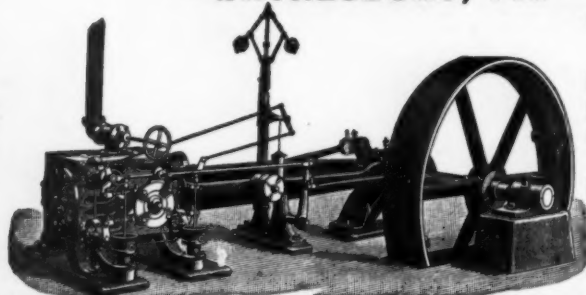
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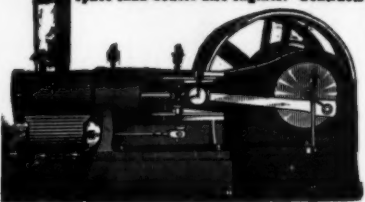
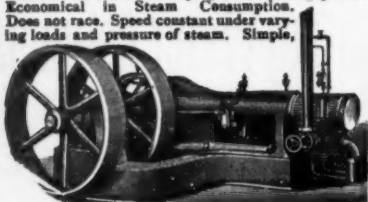
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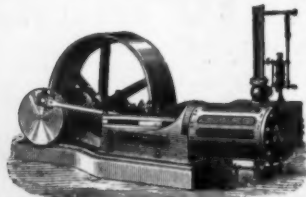


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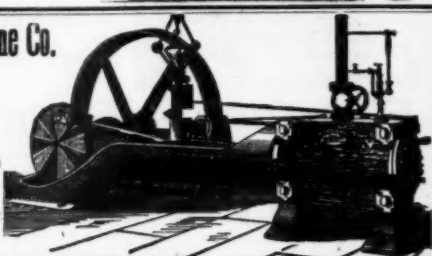
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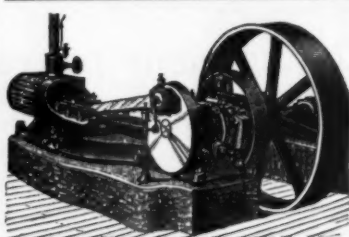
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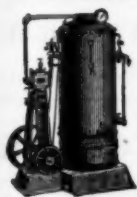
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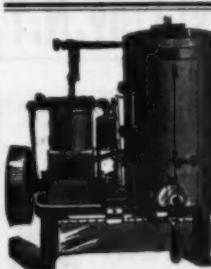
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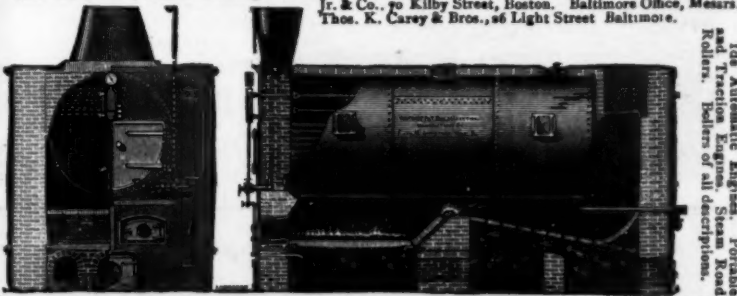
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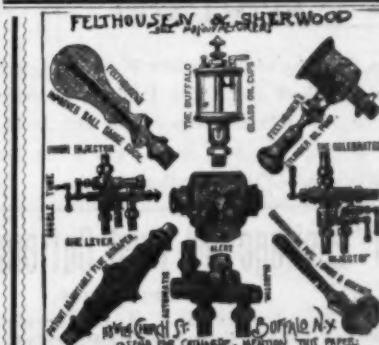
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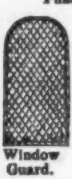
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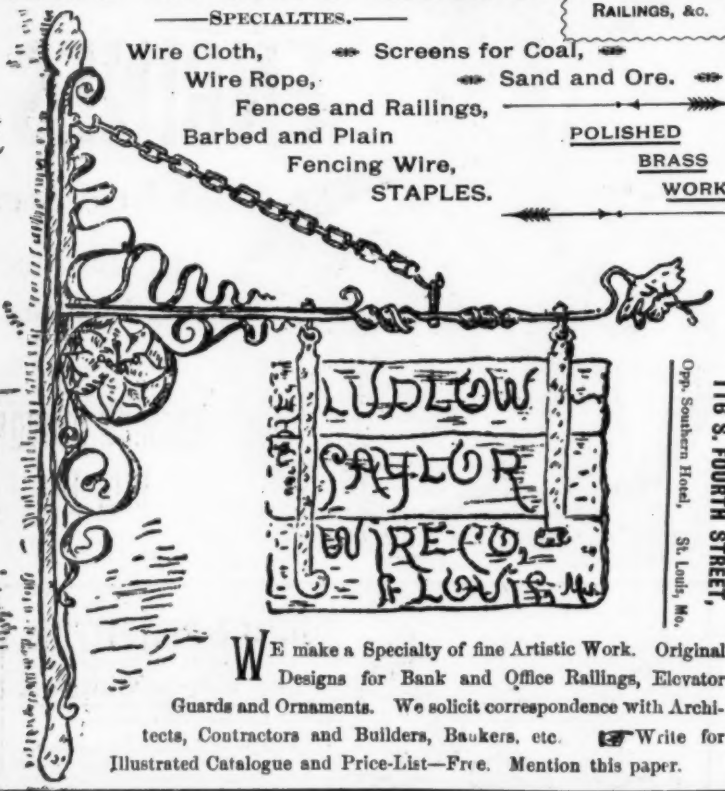
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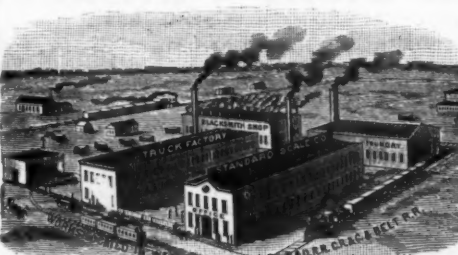
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It is Water-Proof, Weather-Proof, Acid-Proof and practically Fire-Proof. Is endorsed by the New England Mutual Fire Insurance Co.  
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## TRADE NOTES.

THE Valley Iron Works, Williamsport, Penna., have booked the order of Montague & Co., Chattanooga, Tenn., for one of the largest double disc center crank automatic cut-off engines in the country. It will be of 250 horse-power, of the type known as self-contained, delivery of which will be made in six weeks.

IN Lowell, Mass., at the Appleton Co., much new machinery has been added the past summer (all American build), a general re-arrangement made, and excellent results beginning to be obtained. Among the new machinery are a large number of the improved Pop & Pevey cards; also pickers from the Atherton Machine Co. When complete it will be one of the best arranged mills in the country.

THE exhibit of the Chalmers-Spence Co. at the American Institute Fair, New York, this year was a decidedly interesting one. The company displayed a full line of their standard asbestos manufactures, including the popular fire felt pipe and boiler covering made by them. A marine boiler covered with this material and a machine for making asbestos yarn, shown in operation, attracted considerable attention.

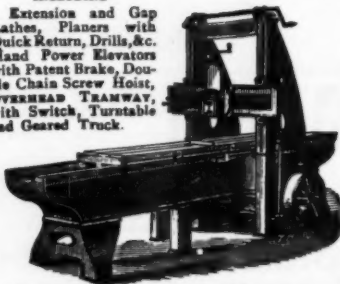
TROY, ALA., is at the intersection of the Mobile & Girard branch of the Georgia Central with the Alabama Midland; 50 miles from the Georgia line, 60 from the Florida line and 45 miles southeast of Montgomery, and is the seat of several prosperous manufactures. It is in the midst of one of the finest agricultural and timber belts in the South, and ships annually over 30,000 bales of cotton. Nearly all religious denominations are represented by one or more churches. The population is 3,500. The Troy Messenger is a six-column eight-page paper, published every Thursday at \$1.50 per year, and will keep you posted as to everything transpiring in that section. Send orders to W. J. Blun, proprietor, Troy, Ala. Specimen copies free.

ELECTRIC LIGHTING IN MEXICO.—Mr. Theo. Plate, president of the Interstate Gas & Water Works Co., of St. Louis, has recently secured franchises extending over long terms of years, for erecting and operating incandescent electric light plants in the cities of Durango and Agues Calientes, Old Mexico. In both cases the franchises are accompanied with contracts for lighting the streets and other public places. In Durango the authorities use 200 thirty-two candle-power lights and 150 sixteen candle-power lights, and at Agues Calientes 150 thirty-two candle-power lights and 175 sixteen candle-power lights. These lights are to be operated in the neighborhood of 240 hours per month. The Heisler system of long distance incandescent lighting has been adopted for these plants, and orders have been placed with the St. Louis office of the company for complete outfits of central station apparatus. The plants will be models in every way, and on account of the high cost of fuel, compound condensing engines of the high speed type will be used. It is expected that this apparatus will be ready for shipment about January 1st, as the plants are to be in operation in time for the annual feasts, which take place early in the spring. Mr. Plate and his engineer, Mr. Andrews, left for Mexico on the evening of the 21st inst., to begin active operations.

THE Clifton Manufacturing Co., at Clifton, S. C., have a world-wide reputation for the superiority of their goods. Many Northern mills now try to imitate these, which speaks well for the management of the Clifton. Formerly our Southern manufacturer was trying to imitate those made at the North.

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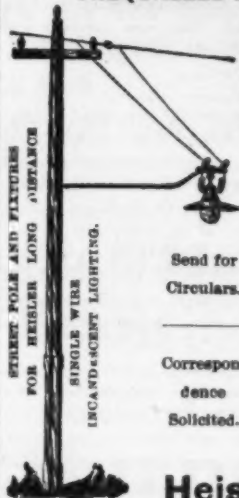
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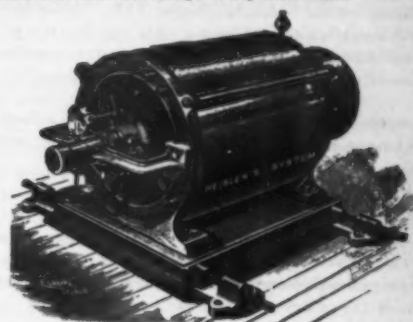
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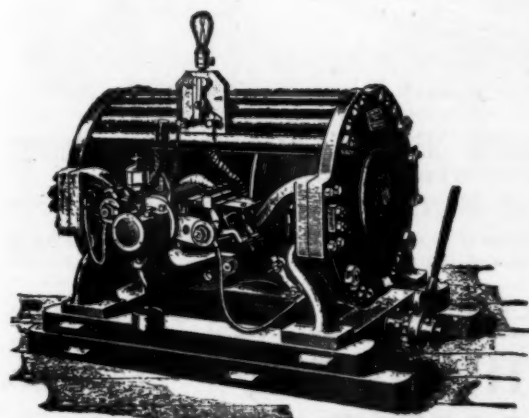
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The Thomson-Houston Dynamos are automatic in regulation under all changes in load. Any decrease in the number of lamps burning is followed by a corresponding decrease in the amount of power required by the dynamo.

The lamps, under repeated tests, have burned two and three times their guaranteed life without any blackening of the bulb or diminution of the candle power.

ESTIMATES FURNISHED FOR COMPLETE INSTALLATIONS

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## TRADE NOTES.

LOWELL MACHINE SHOP have recently made heavy shipments of cotton machinery to the South, among which are the improved Fop & Pevey cotton cards for mill at Monbo, N. C.

THE Valley Iron Works, of Williamsport, Penna., builders of the "Valley" engines, are placing for the Southern District Telegraph & Electric Co., of Florence, Ala., an engine of 80 horse-power to be used in the increase of their electric-light plant.

As there seems to be a mistaken idea in some quarters that the "friction covering" for pulleys which is being placed on the market by the National Pulley Covering Co., of Baltimore, is composed of paper or cloth and is supplied in layers, they wish to correct it. Their covering is furnished in one piece, enough longer than the circumference of the pulley to make a lap, can be applied without removing the belt or using a rivet, and is composed of material whose frictional resistance is greater than anything known and cannot wear smooth. Among other recent business of the company has been orders for covers 26 inches wide from New Orleans, and 23 inches wide from Bristol, Pa.

THE RICHMOND ICE MACHINE CO.—The organization of this responsible and well-backed company marks an epoch, so to speak, in the history of Southern industrial progress. This company is the pioneer in building compression ice machines in the South. The possibilities of cold storage are limitless, for the ice machine wipes out the elements of climatology and puts the Southern grazier and planter on an equal footing with the ranchman and farmer of the West and Northwest. The Richmond Ice Machine Co. enters the field with a charter broad enough to permit it to compete with established rivals, and it is prepared to supply plants of all capacities from the smallest to the largest. The company's descriptive prospectus explains fully its plans, purposes and resources, and will be mailed on application. The officers are: Herman Schmidt, president; Wm. Simpkins, vice-president and general agent; E. A. Catlin, secretary and treasurer, and A. R. Tatum, R. G. Renolds and Wm. P. De Saussure.

A VERY comprehensive catalogue is sent out by the Standard Dry-kiln Co., of Louisville, Ky., descriptive of the Standard hot blast apparatus and its varied applications. This company has had an extended and successful experience in the dry-kiln business, and with seventeen years' practical knowledge of lumber and its proper treatment, and being thoroughly conversant with steam and its uses, confidently asserts that its apparatus is unequalled for simplicity, durability, efficiency and economy, and that, in point of workmanship and design, it cannot be excelled. The success of "the Standard" kiln and heating apparatus has been most gratifying, and is not alone solely due to its merit, but also, in some degree, to the personal supervision given to the details of the business. That the apparatus stands high is attested by numerous letters of commendation in the back of this catalogue. The company is centrally located, and is thus enabled to save the buyer expensive freights; a large stock is constantly on hand and insures prompt delivery. Parties interested in the rapid and successful drying of lumber, staves, heading, brick, tobacco, etc., and the most approved method of heating and ventilating buildings, will find this catalogue worthy of careful study and consideration. The catalogue is a good piece of letter press work, and all the products of the company are thoroughly described and illustrated. Catalogues will be sent upon application to the company.

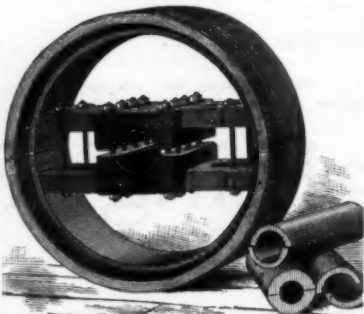
CHANGE OF FIRM.—Messrs. E. E. Garvin & Co., Laight and Canal streets, New York city, announce that they have transferred their business to the Garvin Machine Co., which assumes all accounts due to or by the former firm. The new company will continue the business, and solicits a continuance of patronage.

C. W. EDMONDS, of Memphis, Tenn., formerly connected with the Milburn Gin & Machine Co., but now secretary and treasurer of the Tennessee Brick Manufacturing Co., writes to the St. Louis Iron & Machine Works, of St. Louis, Mo., as follows: "Our company contracted with you last spring for one of your 'Lion' brick machines, having concluded (after our president and superintendent had thoroughly investigated most of other machines, including the 'Hydraulic') that yours possessed more advantages and promised better results. In due course the machine was delivered, set up and put into operation. After having operated it all summer to full capacity, we are more than pleased with results, and can heartily recommend the machine to anyone contemplating a purchase. To appreciate the merits it must be seen performing work. Wishing you eminent success, which you so well merit, we remain."

THERE is one point in this county, says the Nashville (N. C.) Argonaut, where in the war of the Revolution and the late war between the States, a furnace was built and good charcoal iron made. Our entire State is simply groaning with the burden of its mineral wealth, awaiting energy and capital to develop its magnificent and inexhaustible riches and add them to the wealth of the world. A movement is now on foot, backed by large capital, which will undertake the development of some of the mineral resources of this section of the State on a large scale.

## Wood Split Pulleys.

The accompanying illustration shows a wood split pulley made by the Wood Split Pulley Co., of Chattanooga, Tenn. The company claims for these pulleys that they are the most substantial in use; have great



power of tension, and will fit any sized shaft. In their circular they say:

"The manner of adjusting is entirely new, and makes the most substantial pulley ever made. It is quicker put on, and will stand the greatest strain without affecting it. Every pulley will stand tension of double belt, and, by the bushing system, will fit any size shaft."

Any further information desired can be had from the company.

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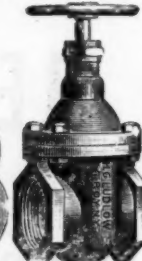
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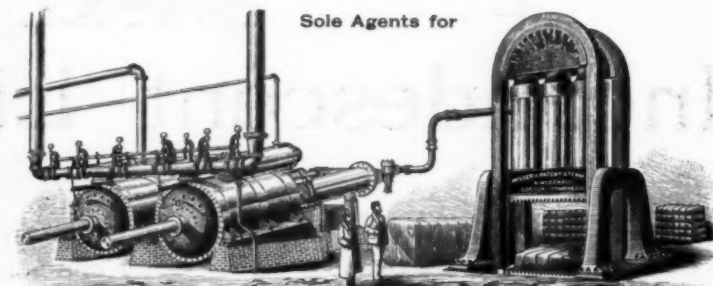
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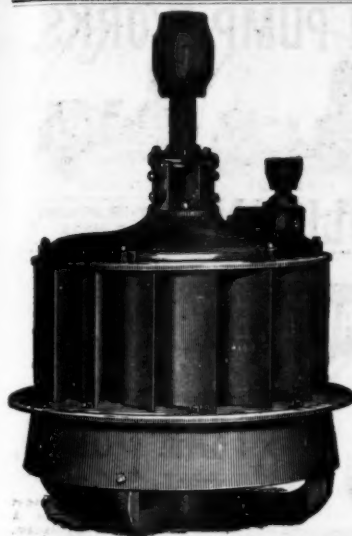
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Size of Wheel.	Head in Ft.	Horse Power.	Per Ct. Useful Effect
15-inch.	18.00	30.17	.9000
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20-inch.	18.31	48.00	.9000
25-inch.	17.90	60.00	.9004
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WITH PROPORTIONATELY HIGH EFFICIENCY AT PART-GATE.

Such results, together with its nicely-working gate, and simple, strong and durable construction, should favorably recommend it to the attention of ALL discriminating purchasers. These wheels are of very Superior Workmanship and Finish, and of the Best Material.

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THE SYSTEM adopted by this company for the use of Crude Petroleum as fuel is both simple, economical and effective. Perfect combustion, uniform heat, regulated as easily as an ordinary lamp. Although comparatively new, being only introduced in April of this year, the number of fires using it AMOUNT TO NEAR ONE THOUSAND, WHICH IS PROBABLY MORE THAN ALL THE OTHER DEVICES FOR THIS PURPOSE COMBINED.

This company has yet to meet with the first failure in its appliance. The company is ready to put up any number of fires on trial, and to remove the same free of all expense should it fail to do what is represented.

We use the ordinary blast blower (found in most every establishment) that will give 5 to 6 oz. pressure. Steam or compressed air dispensed with.

This Method is well adapted for Desulphurizing Ores and other Mining Purposes.

OFFICE OF LAKE ERIE IRON CO.,  
101 CLAIR STREET, CLEVELAND, O., June 28th, 1899.

Gentlemen: In reply to your request for a testimonial as to the merits of your burners, we beg to state that when you first proposed to put your burners in our works we were rather doubtful as to the real value of all you claimed. After a trial of three burners we increased the number to twenty-three, and have added twelve more, and in the near future will use no other means of combustion.

We save sixty-five per cent in fuel, fifty in labor and twenty-five in time, besides producing a better article; and in health and comfort to operators it is beyond comparison.

Yours very truly,

LAKE ERIE IRON CO., G. W. SCOFIELD, Treas.

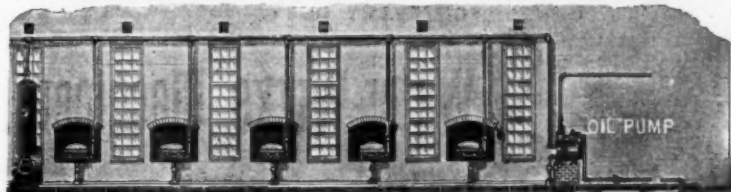
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This Company offers to Iron and Steel Manufacturers their system of burning Crude Petroleum, which they warrant superior to any on the market. We put it in on trial on its merits. The cost is one-third less than the cheapest. For particulars apply to office,

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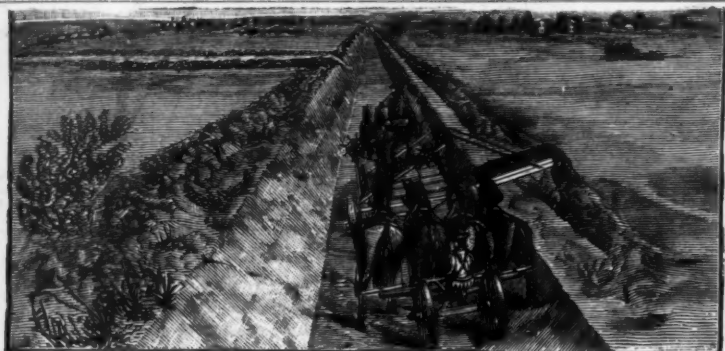
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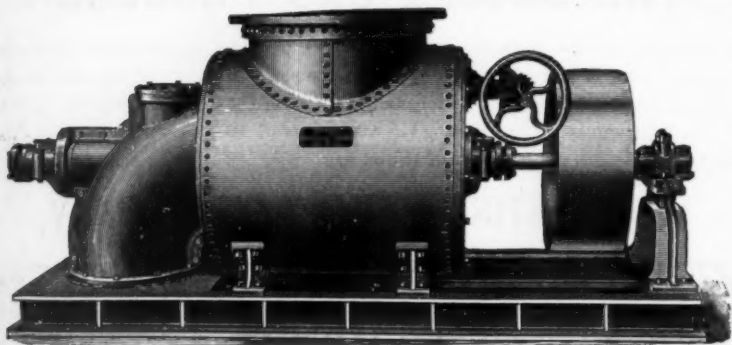
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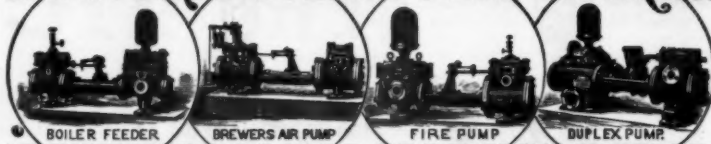


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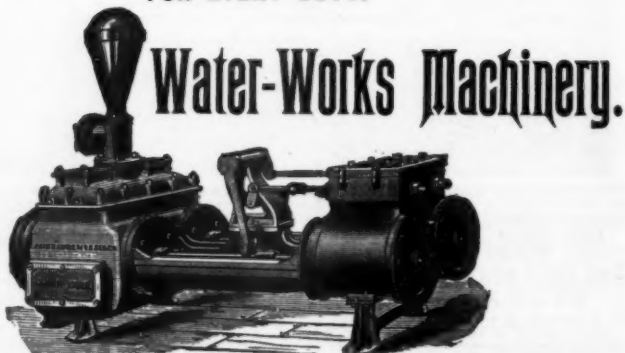
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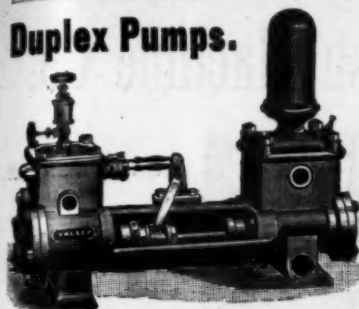
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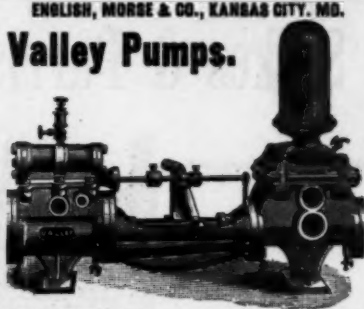
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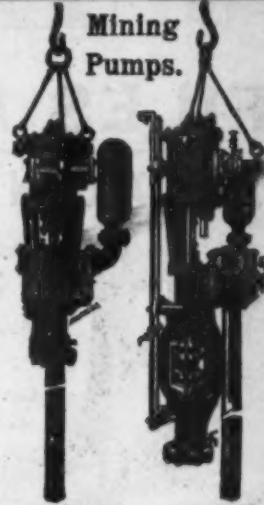
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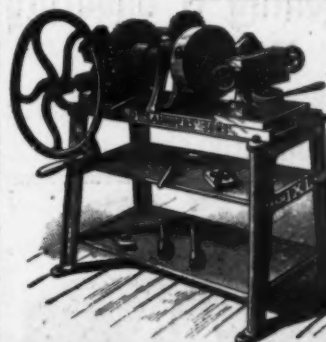
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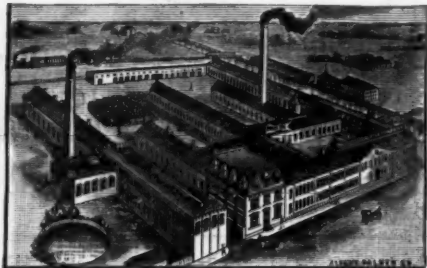


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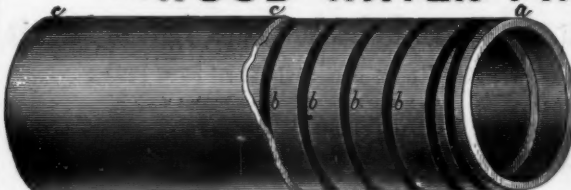
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